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FILE 'REGISTRY' ENTERED AT 09:16:06 ON 21 OCT 2004
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STRUCTURE FILE UPDATES: 20 OCT 2004 HIGHEST RN 766487-31-4 DICTIONARY FILE UPDATES: 20 OCT 2004 HIGHEST RN 766487-31-4

TSCA INFORMATION NOW CURRENT THROUGH MAY 21, 2004

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Experimental and calculated property data are now available. For more information enter HELP PROP at an arrow prompt in the file or refer to the file summary sheet on the web at: http://www.cas.org/ONLINE/DBSS/registryss.html

=> d 133 ide can tot

L33 ANSWER 1 OF 10 REGISTRY COPYRIGHT 2004 ACS on STN

RN 477965-70-1 REGISTRY

CN Benz[cd]indazol-4-ol, 2-(2-aminopropyl)-2,6,7,8-tetrahydro-, dihydrochloride (9CI) (CA INDEX NAME)

OTHER NAMES:

CN 2-(2-Aminopropyl)-2,6,7,8-tetrahydrobenzo[cd]indazol-4-ol dihydrochloride

MF C13 H17 N3 O . 2 Cl H

SR CA

LC STN Files: CA, CAPLUS, USPATFULL

DT.CA CAplus document type: Patent

RL.P Roles from patents: BIOL (Biological study); PREP (Preparation); USES (Uses)

CRN (477965-61-0)

●2 HCl

1 REFERENCES IN FILE CA (1907 TO DATE)

1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 138:24711

L33 ANSWER 2 OF 10 REGISTRY COPYRIGHT 2004 ACS on STN

RN 477965-69-8 REGISTRY

CN Pyrazolo[3,4,5-de]isoquinolin-7-ol, 1-(2-aminopropyl)-1,3,4,5-tetrahydro-4-

methyl- (9CI) (CA INDEX NAME)

OTHER NAMES:

CN 1-(2-Aminopropyl)-4-methyl-1,3,4,5-tetrahydropyrazolo[4,3,2-de]isoquinolin-7-ol

FS 3D CONCORD

MF C13 H18 N4 O

SR CA

LC STN Files: CA, CAPLUS, USPATFULL

DT.CA CAplus document type: Patent

RL.P Roles from patents: BIOL (Biological study); PREP (Preparation); USES (Uses)

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)

1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 138:24711

L33 ANSWER 3 OF 10 REGISTRY COPYRIGHT 2004 ACS on STN

RN 477965-68-7 REGISTRY

CN 1H-Pyrano[4,3,2-cd]indazol-7-ol, 1-(2-aminopropyl)- (9CI) (CA INDEX NAME) OTHER NAMES:

CN 1-(2-Aminopropyl)-5H-pyrano[4,3,2-cd]indazol-7-ol

FS 3D CONCORD

MF C12 H13 N3 O2

SR CA

LC STN Files: CA, CAPLUS, USPATFULL

DT.CA CAplus document type: Patent

RL.P Roles from patents: BIOL (Biological study); PREP (Preparation); USES (Uses)

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)

1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 138:24711

USES

L33 ANSWER 4 OF 10 REGISTRY COPYRIGHT 2004 ACS on STN

RN 477965-67-6 REGISTRY

CN Benz[cd]indol-7-ol, 1-(2-aminopropyl)-1,3,4,5-tetrahydro- (9CI) (CA INDEX NAME)

OTHER NAMES:

CN 1-(2-Aminopropyl)-1,3,4,5-tetrahydrobenzo[cd]indol-7-ol

FS 3D CONCORD

MF C14 H18 N2 O

SR - CA

LC STN Files: CA, CAPLUS, USPATFULL

DT.CA CAplus document type: Patent

RL.P Roles from patents: BIOL (Biological study); PREP (Preparation); USES (Uses)

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)

1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 138:24711

L33 ANSWER 5 OF 10 REGISTRY COPYRIGHT 2004 ACS on STN

RN 477965-66-5 REGISTRY

CN Cyclopropanecarboxylic acid, 2-(2-aminopropyl)-2,6,7,8-

tetrahydrobenz[cd]indazol-4-yl ester (9CI) (CA INDEX NAME)

OTHER NAMES:

CN Cyclopropanecarboxylic acid 2-(2-aminopropyl)-2,6,7,8-

tetrahydrobenzo[cd]indazol-4-yl ester

FS 3D CONCORD

MF C17 H21 N3 O2

SR CA

LC STN Files: CA, CAPLUS, USPATFU

DT.CA CAplus document type: Patent

RL.P Roles from patents: BIOL (Bio

(Uses)

Comfound \$ 60

dain 5

0 0 0 N— N NH2 CH2- CH- Me This compound is NOT covered by Claim !!!

**PROPERTY DATA AVAILABLE IN THE 'PRC_

1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 138:24711

L33 ANSWER 6 OF 10 REGISTRY COPYRIGHT 2004 ACS on STN

RN 477965-65-4 REGISTRY

CN Benz[cd]indazole-1(3H)-ethanamine, 6-fluoro-4,5-dihydro-7-methoxy-α-methyl- (9CI) (CA INDEX NAME)

OTHER NAMES:

CN 2-(6-Fluoro-7-methoxy-4,5-dihydro-3H-benzo[cd]indazol-1-yl)-1-methylethylamine

FS 3D CONCORD

MF C14 H18 F N3 O

SR CA

LC STN Files: CA, CAPLUS, USPATFULL

DT.CA CAplus document type: Patent

RL.P Roles from patents: BIOL (Biological study); PREP (Preparation); USES (Uses)

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)

1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 138:24711

L33 ANSWER 7 OF 10 REGISTRY COPYRIGHT 2004 ACS on STN

RN 477965-64-3 REGISTRY

CN Benz[cd]indazol-4-ol, 2-(2-aminopropyl)-5-fluoro-2,6,7,8-tetrahydro- (9CI) (CA INDEX NAME)

OTHER NAMES:

CN 2-(2-Aminopropyl)-5-fluoro-2,6,7,8-tetrahydrobenzo[cd]indazol-4-ol

FS 3D CONCORD

MF C13 H16 F N3 O

SR CA

LC STN Files: CA, CAPLUS, USPATFULL

DT.CA CAplus document type: Patent

RL.P Roles from patents: BIOL (Biological study); PREP (Preparation); USES (Uses)

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)

1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 138:24711

L33 ANSWER 8 OF 10 REGISTRY COPYRIGHT 2004 ACS on STN

RN 477965-63-2 REGISTRY

CN Benz[cd]indazol-4-ol, 2-(2-aminopropyl)-2,6,7,8-tetrahydro-5-methyl- (9CI) (CA INDEX NAME)

OTHER NAMES:

CN 2-(2-Aminopropyl)-5-methyl-2,6,7,8-tetrahydrobenzo[cd]indazol-4-ol

FS 3D CONCORD

MF C14 H19 N3 O

SR CA

LC STN Files: CA, CAPLUS, USPATFULL

DT.CA CAplus document type: Patent

RL.P Roles from patents: BIOL (Biological study); PREP (Preparation); USES (Uses)

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)

1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 138:24711

L33 ANSWER 9 OF 10 REGISTRY COPYRIGHT 2004 ACS on STN

RN 477965-62-1 REGISTRY

CN Benz[cd]indazol-4-ol, 2-[2-(dimethylamino)ethyl]-2,6,7,8-tetrahydro- (9CI) (CA INDEX NAME)

OTHER NAMES:

CN 2-(2-Dimethylaminoethyl)-2,6,7,8-tetrahydrobenzo[cd]indazol-4-ol

FS 3D CONCORD

MF C14 H19 N3 O

SR CA

LC STN Files: CA, CAPLUS, USPATFULL

DT.CA CAplus document type: Patent

RL.P Roles from patents: BIOL (Biological study); PREP (Preparation); USES (Uses)

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)

1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 138:24711

L33 ANSWER 10 OF 10 REGISTRY COPYRIGHT 2004 ACS on STN

RN 477965-61-0 REGISTRY

CN Benz[cd]indazol-4-ol, 2-(2-aminopropyl)-2,6,7,8-tetrahydro- (9CI) (CA INDEX NAME)

OTHER NAMES:

CN 2-(2-Aminopropyl)-2,6,7,8-tetrahydrobenzo[cd]indazol-4-ol

FS 3D CONCORD

MF C13 H17 N3 O

CI COM

SR CA

LC STN Files: CA, CAPLUS, USPATFULL

DT.CA CAplus document type: Patent

RL.P Roles from patents: BIOL (Biological study); PREP (Preparation); USES (Uses)

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

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1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 138:24711

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L2
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L3
             53 S E4-E8
                E DANTANARAYANA/AU
             26 S E4-E7
L4
                E ANURA/AU
                E ALCON/PA,CS
                E ALCOM/PA,CS
            868 S E3-E101
L5
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             10 S L7, L8
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L36
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L37
              1 S L36 AND L1-L5
L38
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FILE 'USPATFULL' ENTERED AT 09:16:16 ON 21 OCT 2004 CA INDEXING COPYRIGHT (C) 2004 AMERICAN CHEMICAL SOCIETY (ACS) FILE 'USPAT2' ENTERED AT 09:16:16 ON 21 OCT 2004 CA INDEXING COPYRIGHT (C) 2004 AMERICAN CHEMICAL SOCIETY (ACS) => d 135 bib abs hitstr L35 ANSWER 1 OF 1 USPATFULL on STN ΑN 2004:139421 USPATFULL Novel fused indazoles and indoles and their use for the treatment of ΤI glaucoma May, Jesse A., Fort Worth, TX, UNITED STATES IN Dantanarayana, Anura P., Fort Worth, TX, UNITED STATES US 2004106597 PΙ 20040603 A1 US 2003-721204 A1 20031125 (10) ΑI Continuation of Ser. No. WO 2002-US17114, filed on 30 May 2002, PENDING RLI US 2001-295428P 20010601 (60) PRAI DT Utility APPLICATION FS KILYK & BOWERSOX, P.L.L.C., 53 A EAST LEE STREET, WARRENTON, VA, 20186 LREP Number of Claims: 19 CLMN Exemplary Claim: 1 ECL DRWN No Drawings LN.CNT 924 CAS INDEXING IS AVAILABLE FOR THIS PATENT. Novel fused indazoles and indoles are disclosed. Also disclosed are AB methods for the lowering and controlling of normal or elevated intraocular pressure as well as a method for the treatment of glaucoma using compositions containing one or more of the compounds of the present invention. CAS INDEXING IS AVAILABLE FOR THIS PATENT. IT 477965-61-0P, 2-(2-Aminopropyl)-2,6,7,8tetrahydrobenzo[cd]indazol-4-ol 477965-62-1P, 2-(2-Dimethylaminoethyl)-2,6,7,8-tetrahydrobenzo[cd]indazol-4-ol 477965-63-2P, 2-(2-Aminopropyl)-5-methyl-2,6,7,8tetrahydrobenzo[cd]indazol-4-ol 477965-64-3P, 2-(2-Aminopropyl)-5-fluoro-2,6,7,8-tetrahydrobenzo[cd]indazol-4-ol 477965-65-4P, 2-(6-Fluoro-7-methoxy-4,5-dihydro-3Hbenzo[cd]indazol-1-yl)-1-methylethylamine 477965-66-5P, Cyclopropanecarboxylic acid 2-(2-aminopropyl)-2,6,7,8tetrahydrobenzo[cd]indazol-4-yl ester 477965-67-6P, 1-(2-Aminopropyl)-1,3,4,5-tetrahydrobenzo[cd]indol-7-ol 477965-68-7P, 1-(2-Aminopropyl)-5H-pyrano[4,3,2-cd]indazol-7-ol 477965-69-8P, 1-(2-Aminopropyl)-4-methyl-1,3,4,5tetrahydropyrazolo[4,3,2-de]isoquinolin-7-ol 477965-70-1P, 2-(2-Aminopropyl)-2,6,7,8-tetrahydrobenzo[cd]indazol-4-ol dihydrochloride (drug candidate; preparation of novel fused indazoles and indoles with 5-HT2 receptor activity for use in the treatment of glaucoma)

Benz[cd]indazol-4-ol, 2-(2-aminopropyl)-2,6,7,8-tetrahydro- (9CI)

477965-61-0 USPATFULL

INDEX NAME)

RN

CN

RN 477965-62-1 USPATFULL

CN Benz[cd]indazol-4-ol, 2-[2-(dimethylamino)ethyl]-2,6,7,8-tetrahydro- (9CI) (CA INDEX NAME)

RN 477965-63-2 USPATFULL

CN Benz[cd]indazol-4-ol, 2-(2-aminopropyl)-2,6,7,8-tetrahydro-5-methyl- (9CI) (CA INDEX NAME)

RN 477965-64-3 USPATFULL

CN Benz[cd]indazol-4-ol, 2-(2-aminopropyl)-5-fluoro-2,6,7,8-tetrahydro- (9CI) (CA INDEX NAME)

RN 477965-65-4 USPATFULL

CN Benz[cd]indazole-1(3H)-ethanamine, 6-fluoro-4,5-dihydro-7-methoxy-αmethyl- (9CI) (CA INDEX NAME)

RN 477965-66-5 USPATFULL
CN Cyclopropanecarboxylic acid, 2-(2-aminopropyl)-2,6,7,8tetrahydrobenz[cd]indazol-4-yl ester (9CI) (CA INDEX NAME)

$$\begin{array}{c|c} & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & \\ & & \\ &$$

RN 477965-67-6 USPATFULL CN Benz[cd]indol-7-ol, 1-(2-aminopropyl)-1,3,4,5-tetrahydro- (9CI) (CA INDEX NAME)

RN 477965-68-7 USPATFULL CN 1H-Pyrano[4,3,2-cd]indazol-7-ol, 1-(2-aminopropyl)- (9CI) (CA INDEX NAME)

RN 477965-69-8 USPATFULL CN Pyrazolo[3,4,5-de]isoquinolin-7-ol, 1-(2-aminopropyl)-1,3,4,5-tetrahydro-4-methyl- (9CI) (CA INDEX NAME)

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●2 HCl

=> fil hcaplus FILE 'HCAPLUS' ENTERED AT 09:16:24 ON 21 OCT 2004 USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT. PLEASE SEE "HELP USAGETERMS" FOR DETAILS. COPYRIGHT (C) 2004 AMERICAN CHEMICAL SOCIETY (ACS)

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FILE COVERS 1907 - 21 Oct 2004 VOL 141 ISS 17 FILE LAST UPDATED: 20 Oct 2004 (20041020/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

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L37 ANSWER 1 OF 1 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 2002:946270 HCAPLUS

DN 138:24711

ED Entered STN: 13 Dec 2002

TI Novel fused indazoles and indoles with 5-HT2 receptor activity, and their

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use for lowering of intraocular pressure in the treatment of glaucoma
    May, Jesse A.; Dantanarayana, Anura P.
IN
PA
     Alcon, Inc., Switz.
     PCT Int. Appl., 35 pp.
SO
     CODEN: PIXXD2
DT
     Patent
LА
     English
IC
     ICM C07D231-54
     ICS A61K031-416
     28-8 (Heterocyclic Compounds (More Than One Hetero Atom))
CC
     Section cross-reference(s): 1, 27
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                                          APPLICATION NO.
     PATENT NO.
                        KIND
                               DATE
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                                         WO 2002-US17114
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     WO 2002098860
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            CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,
            GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR,
            LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH,
            PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ,
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     US 2004106597
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PRAI US 2001-295428P
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CLASS
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                CLASS
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 WO 2002098860
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                       A61K031-416
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     MARPAT 138:24711
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Self

AB Novel fused indazoles and indoles are disclosed. Also disclosed are methods for the lowering and controlling of normal or elevated intraocular pressure, as well as a method for the treatment of glaucoma, using compns. containing one or more of the invention compds. In particular, compds. I are claimed [wherein R1 and R2 are independently chosen from H or alkyl; R3 and R4 are independently chosen from H or alkyl, or R3, R4, and the C atom to which they are attached form cycloalkyl; or R2 and R3 together are (CH2)m to form a saturated heterocycle; R5 is chosen from OH, alkoxy, alkyl, halogen, or OC(O)W; R6 is chosen from H, halogen, or (un)substituted alkyl; R7 and R8 are H or alkyl; W is (un)substituted alkyl, NR7R8,

II

NR7CH2(CH2)nNR7R8, O-alkyl, or (un)substituted alkenyl; m is 3 or 4; n is 2 or 3; A is a 5- to 7-membered ring optionally containing one heteroatom chosen from NR7, O, or S; X is either N or C; Y and Z are either N or C, wherein Y and Z are different; and the dashed bonds denote a suitably appointed single and double bond; or pharmaceutically acceptable salts or solvates thereof]. Nine specific compds. I are claimed per se, and these compds. plus 13 addnl. unprepd. compds. are claimed in corresponding methods of lowering intraocular pressure or treating glaucoma. instance, title compound II.2HCl was prepared in 8 steps from 1-amino-5,6,7,8-tetrahydronaphthalene (III). The sequence involved: (1) nitration of III in the 2- and 3-positions; (2) diazotization with cyclization to give a benzopyrazole ring; (3) N-alkylation with propylene oxide; (4) hydrogenation of the nitro group to amino; (5) diazotization and hydroxylation of the formed amino group; (6) benzylation of the formed phenolic hydroxy group; (7) mesylation of the alkanolic hydroxy group and conversion to the azide; and (8) hydrogenation of the azide and acidification. II.2HCl bound to rat cortical 5-HT2 receptors in vitro with an IC50 of 0.714 nM, vs. 0.941 for 5-HT itself. This compound also showed agonist activity at rat vascular 5-HT2 receptors in a phosphoinositide turnover assay, and reduced intraocular pressure in conscious cynomolgus monkeys by about 20% for at least 6 h at a dose of 300 µg (topical). indazole indole prepn 5HT2 receptor agonist antagonist treatment glaucoma; serotoninergic agonist antagonist indazole indole prepn intraocular antihypertensive 5-HT agonists 5-HT antagonists (5-HT2A; preparation of novel fused indazoles and indoles with 5-HT2 receptor activity for use in the treatment of glaucoma) 5-HT receptors RL: BSU (Biological study, unclassified); BIOL (Biological study) (binding to; preparation of novel fused indazoles and indoles with 5-HT2 receptor activity for use in the treatment of glaucoma) 5-HT agonists 5-HT antagonists Antiglaucoma agents Antihypertensives (preparation of novel fused indazoles and indoles with 5-HT2 receptor activity for use in the treatment of glaucoma) Hypertension (treatment of intraocular; preparation of novel fused indazoles and indoles with 5-HT2 receptor activity for use in the treatment of glaucoma) Glaucoma (disease) (treatment of; preparation of novel fused indazoles and indoles with 5-HT2 receptor activity for use in the treatment of glaucoma) 5-HT receptors RL: BSU (Biological study, unclassified); BIOL (Biological study) (type 5-HT2, binding to; preparation of novel fused indazoles and indoles with 5-HT2 receptor activity for use in the treatment of glaucoma) 477965-61-0P, 2-(2-Aminopropyl)-2,6,7,8-tetrahydrobenzo[cd]indazol-4-ol 477965-62-1P, 2-(2-Dimethylaminoethyl)-2,6,7,8tetrahydrobenzo[cd]indazol-4-ol 477965-63-2P, 2-(2-Aminopropyl)-5-methyl-2,6,7,8-tetrahydrobenzo[cd]indazol-4-ol 477965-64-3P, 2-(2-Aminopropyl)-5-fluoro-2,6,7,8tetrahydrobenzo[cd]indazol-4-ol 477965-65-4P 2-(6-Fluoro-7-methoxy-4,5-dihydro-3H-benzo[cd]indazol-1-yl)-1methylethylamine 477965-66-5P, Cyclopropanecarboxylic acid 2-(2-aminopropyl)-2,6,7,8-tetrahydrobenzo[cd]indazol-4-yl ester 477965-67-6P, 1-(2-Aminopropyl)-1,3,4,5-tetrahydrobenzo[cd]indol-7ol 477965-68-7P, 1-(2-Aminopropyl)-5H-pyrano[4,3,2-cd]indazol-7-ol 477965-69-8P, 1-(2-Aminopropyl)-4-methyl-1,3,4,5tetrahydropyrazolo[4,3,2-de]isoquinolin-7-ol 477965-70-1P,

2-(2-Aminopropyl)-2,6,7,8-tetrahydrobenzo[cd]indazol-4-ol dihydrochloride

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     (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES
     (Uses)
        (drug candidate; preparation of novel fused indazoles and indoles with 5-HT2
        receptor activity for use in the treatment of glaucoma)
TT
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     477965-97-2, 1-((S)-2-Aminopropyl)-1,7,8,9-tetrahydropyrano[2,3-g]indazol-
            477965-99-4, (R)-1-((S)-2-Aminopropyl)-1,7,8,9-tetrahydropyrano[2,3-
                     477966-02-2, (S)-1-((S)-2-Aminopropyl)-1,7,8,9-
     q].indazol-8-ol
     tetrahydropyrano[2,3-g]indazol-8-ol
                                          477966-04-4, 1-((S)-2-Aminopropyl)-3-
     methyl-1,7,8,9-tetrahydropyrano[2,3-g]indazol-8-ol
                                                        477966-06-6,
     1-((S)-1-Pyrrolidin-2-ylmethyl)-1,7,8,9-tetrahydropyrano[2,3-g]indazol-8-
          477966-08-8, 1-((S)-2-Aminopropyl)-5-fluoro-1,7,8,9-
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     1,7,8,9-tetrahydropyrano[2,3-g]indazol-8-yl]dimethylamine
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     [1-((S)-2-Aminopropyl)-1,7,8,9-tetrahydropyrano[2,3-g]indazol-8-
     yl]methanol
                   477966-13-5, 1-(2-Aminopropyl)-3,7,8,9-tetrahydropyrano[3,2-
                      477966-15-7, 1-(Pyrrolidin-2-ylmethyl)-3,7,8,9-
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     tetrahydropyrano[3,2-e]indazol-8-ol 477966-17-9, 1-((S)-2-Aminopropyl)-
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     1-((S)-2-Aminopropyl)-3-methyl-3,7,8,9-tetrahydropyrano[3,2-e]indazol-8-ol
     RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL
     (Biological study); USES (Uses)
        (drug candidate; preparation of novel fused indazoles and indoles with 5-HT2
        receptor activity for use in the treatment of glaucoma)
     50536-99-7P, 3-Nitro-5,6,7,8-tetrahydronaphthalen-1-ylamine
тт
                                                                   78422-66-9P,
     2-Nitro-5,6,7,8-tetrahydronaphthalen-1-ylamine
                                                     477965-72-3P,
     7-Nitro-1,3,4,5-tetrahydrobenzo[cd]indazole
                                                  477965-73-4P,
     1-(7-Nitro-4,5-dihydro-3H-benzo[cd]indazol-1-yl)propan-2-ol
     477965-75-6P, 1-(7-Amino-4,5-dihydro-3H-benzo[cd]indazol-1-yl)propan-2-ol
     477965-77-8P, 2-(2-Hydroxypropyl)-2,6,7,8-tetrahydrobenzo[cd]indazol-4-ol
     477965-79-0P, 1-(7-Benzyloxy-4,5-dihydro-3H-benzo[cd]indazol-1-yl)propan-2-
          477965-81-4P, 1-(2-Azidopropyl)-7-benzyloxy-1,3,4,5-
     tetrahydrobenzo[cd]indazole
                                  477965-83-6P, 8-Nitro-1,3,4,5-
                                  477965-85-8P, 1-(8-Nitro-4,5-dihydro-3H-
     tetrahydrobenzo[cd]indazole
                                       477965-87-0P, 1-(8-Amino-4,5-dihydro-
     benzo[cd]indazol-1-yl)propan-2-ol
     3H-benzo[cd]indazol-1-yl)propan-2-ol 477965-89-2P, 2-(2-Hydroxypropyl)-
     2,6,7,8-tetrahydrobenzo[cd]indazol-3-ol 477965-91-6P,
     1-(8-Benzyloxy-4,5-dihydro-3H-benzo[cd]indazol-1-yl)propan-2-ol
     477965-93-8P, 1-(2-Azidopropyl)-8-benzyloxy-1,3,4,5-
     tetrahydrobenzo[cd]indazole
     RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
     (Reactant or reagent)
        (intermediate; preparation of novel fused indazoles and indoles with 5-HT2
        receptor activity for use in the treatment of glaucoma)
IT
     75-56-9, Propylene oxide, reactions
                                           100-39-0, Benzyl bromide
     2217-41-6, 1-Amino-5,6,7,8-tetrahydronaphthalene
     RL: RCT (Reactant); RACT (Reactant or reagent)
        (starting material; preparation of novel fused indazoles and indoles with
        5-HT2 receptor activity for use in the treatment of glaucoma)
              THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE.CNT
RE
(1) Flaugh; US 5385928 A 1995 HCAPLUS
     477965-61-0P, 2-(2-Aminopropyl)-2,6,7,8-tetrahydrobenzo[cd]indazol-
     4-ol 477965-62-1P, 2-(2-Dimethylaminoethyl)-2,6,7,8-
     tetrahydrobenzo[cd]indazol-4-ol 477965-63-2P,
     2-(2-Aminopropyl)-5-methyl-2,6,7,8-tetrahydrobenzo[cd]indazol-4-ol
     477965-64-3P, 2-(2-Aminopropyl)-5-fluoro-2,6,7,8-
     tetrahydrobenzo[cd]indazol-4-ol 477965-65-4P,
     2-(6-Fluoro-7-methoxy-4,5-dihydro-3H-benzo[cd]indazol-1-yl)-1-
     methylethylamine 477965-66-5P, Cyclopropanecarboxylic acid
```

2-(2-aminopropyl)-2,6,7,8-tetrahydrobenzo[cd]indazol-4-yl ester 477965-67-6P, 1-(2-Aminopropyl)-1,3,4,5-tetrahydrobenzo[cd]indol-7ol 477965-68-7P, 1-(2-Aminopropyl)-5H-pyrano[4,3,2-cd]indazol-7ol 477965-69-8P, 1-(2-Aminopropyl)-4-methyl-1,3,4,5tetrahydropyrazolo[4,3,2-de]isoquinolin-7-ol 477965-70-1P, 2-(2-Aminopropyl)-2,6,7,8-tetrahydrobenzo[cd]indazol-4-ol dihydrochloride RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses) (drug candidate; preparation of novel fused indazoles and indoles with 5-HT2 receptor activity for use in the treatment of glaucoma) 477965-61-0 HCAPLUS RNBenz[cd]indazol-4-ol, 2-(2-aminopropyl)-2,6,7,8-tetrahydro- (9CI) CN INDEX NAME)

RN 477965-62-1 HCAPLUS
CN Benz[cd]indazol-4-ol, 2-[2-(dimethylamino)ethyl]-2,6,7,8-tetrahydro- (9CI)
(CA INDEX NAME)

RN 477965-63-2 HCAPLUS CN Benz[cd]indazol-4-ol, 2-(2-aminopropyl)-2,6,7,8-tetrahydro-5-methyl- (9CI) (CA INDEX NAME)

RN 477965-64-3 HCAPLUS
CN Benz[cd]indazol-4-ol, 2-(2-aminopropyl)-5-fluoro-2,6,7,8-tetrahydro- (9CI)
(CA INDEX NAME)

RN 477965-65-4 HCAPLUS

CN Benz[cd]indazole-1(3H)-ethanamine, 6-fluoro-4,5-dihydro-7-methoxy- α -methyl- (9CI) (CA INDEX NAME)

RN 477965-66-5 HCAPLUS

CN Cyclopropanecarboxylic acid, 2-(2-aminopropyl)-2,6,7,8tetrahydrobenz[cd]indazol-4-yl ester (9CI) (CA INDEX NAME)

$$\begin{array}{c|c} & & & \\ & & & \\ & & & \\ N & & N \\ & & & \\ N & & & \\ & & & \\ NH_2 \\ & & \\ CH_2-CH-Me \end{array}$$

RN 477965-67-6 HCAPLUS

CN Benz[cd]indol-7-ol, 1-(2-aminopropyl)-1,3,4,5-tetrahydro- (9CI) (CA INDEX NAME)

RN 477965-68-7 HCAPLUS

CN 1H-Pyrano[4,3,2-cd]indazol-7-ol, 1-(2-aminopropyl)- (9CI) (CA INDEX NAME)

RN 477965-69-8 HCAPLUS

CN Pyrazolo[3,4,5-de]isoquinolin-7-ol, 1-(2-aminopropyl)-1,3,4,5-tetrahydro-4-methyl- (9CI) (CA INDEX NAME)

RN 477965-70-1 HCAPLUS

CN Benz[cd]indazol-4-ol, 2-(2-aminopropyl)-2,6,7,8-tetrahydro-, dihydrochloride (9CI) (CA INDEX NAME)

•2 HCl

=> => fil reg

FILE 'REGISTRY' ENTERED AT 06:35:28 ON 26 OCT 2004

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STRUCTURE FILE UPDATES: 24 OCT 2004 HIGHEST RN 768347-62-2 DICTIONARY FILE UPDATES: 24 OCT 2004 HIGHEST RN 768347-62-2

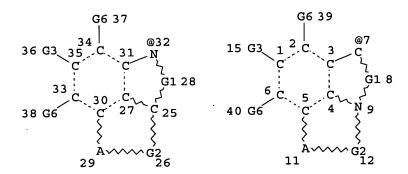
TSCA INFORMATION NOW CURRENT THROUGH MAY 21, 2004

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Experimental and calculated property data are now available. For more information enter HELP PROP at an arrow prompt in the file or refer to the file summary sheet on the web at: http://www.cas.org/ONLINE/DBSS/registryss.html

=> d sta que 12 STR L1 23 @19 0 0 G5-- CH2— C√≫^ N 24 10 13 0---- C--- G4 Ak @20 21 22 17



REP G2=(1-3) A
VAR G3=OH/X/AK/19/20
VAR G4=C/N/O/CY
VAR G5=7/32
VAR G6=H/X/AK
NODE ATTRIBUTES:
NSPEC IS RC AT 13
NSPEC IS RC AT 14
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

VAR G1=C/N

GRAPH ATTRIBUTES: RSPEC 9 25

NUMBER OF NODES IS 38

STEREO ATTRIBUTES: NONE

L2 75 SEA FILE=REGISTRY SSS FUL L1

100.0% PROCESSED 516203 ITERATIONS

SEARCH TIME: 00.00.16

75 ANSWERS

=> d his

(FILE 'HCAPLUS' ENTERED AT 06:31:26 ON 26 OCT 2004)
DEL HIS

FILE 'REGISTRY' ENTERED AT 06:31:42 ON 26 OCT 2004

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ACT SHIAO721/A
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L1 STR

L2 75 SEA FILE=REGISTRY SSS FUL L1

L3 10 S 477965-61-0 OR 477965-62-1 OR 477965-63-2 OR 477965-64-3 OR 4

L4 65 S L2 NOT L3

FILE 'HCAOLD' ENTERED AT 06:32:07 ON 26 OCT 2004 0 S L4

FILE 'HCAPLUS' ENTERED AT 06:32:11 ON 26 OCT 2004

L6 11 S L4

L5

L7 1 S L6 AND (MAY J? OR DANTANARAYANA ?)/AU

L8 1 S L6 AND ALCO?/PA,CS

L9 1 S L7, L8

L10 10 S L6 NOT L9

L11 9 S L10 AND (PD<=20010601 OR PRD<=20010601 OR AD<=20010601)

L12 1 S L10 NOT L11

L13 10 S L10-L12

FILE 'USPATFULL, USPAT2' ENTERED AT 06:34:33 ON 26 OCT 2004

L14 11 S L4

L15 1 S L14 AND (MAY J? OR DANTANARAYANA ?)/AU

L16 10 S L14 NOT L15

FILE 'REGISTRY' ENTERED AT 06:35:28 ON 26 OCT 2004

=> fil hcaplus

FILE 'HCAPLUS' ENTERED AT 06:35:37 ON 26 OCT 2004
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FILE COVERS 1907 - 26 Oct 2004 VOL 141 ISS 18

FILE LAST UPDATED: 25 Oct 2004 (20041025/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

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- L9 ANSWER 1 OF 1 HCAPLUS COPYRIGHT 2004 ACS on STN
- AN 2002:946270 HCAPLUS
- DN 138:24711
- ED Entered STN: 13 Dec 2002
- TI Novel fused indazoles and indoles with 5-HT2 receptor activity, and their use for lowering of intraocular pressure in the treatment of glaucoma
- IN May, Jesse A.; Dantanarayana, Anura P.
- PA Alcon, Inc., Switz.
- SO PCT Int. Appl., 35 pp.

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CODEN: PIXXD2
DT
    Patent
LA
    English
IC
    ICM C07D231-54
    ICS A61K031-416
    28-8 (Heterocyclic Compounds (More Than One Hetero Atom))
    Section cross-reference(s): 1, 27
FAN.CNT 1
                                         APPLICATION NO.
                                                               DATE
    PATENT NO.
                       KIND
                              DATE
                                         -----
                              20021212
                                        WO 2002-US17114
                                                               20020530
PΙ
    WO 2002098860
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            GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR,
            LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH,
            PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ,
            UA, UG, US, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU,
            TJ, TM
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            CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR,
            BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG
                        A1 20040303 EP 2002-734608 20020530
    EP 1392658
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            IE, SI, LT, LV, FI, RO, MK, CY, AL, TR
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                              20010601
                              20020530
    WO 2002-US17114
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CLASS
                CLASS PATENT FAMILY CLASSIFICATION CODES
PATENT NO.
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                      C07D231-54
WO 2002098860
                ICM
                ICS
                      A61K031-416
    MARPAT 138:24711
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GI

Novel fused indazoles and indoles are disclosed. Also disclosed are methods for the lowering and controlling of normal or elevated intraocular pressure, as well as a method for the treatment of glaucoma, using compns. containing one or more of the invention compds. In particular, compds. I are claimed [wherein R1 and R2 are independently chosen from H or alkyl; R3 and R4 are independently chosen from H or alkyl, or R3, R4, and the C atom to which they are attached form cycloalkyl; or R2 and R3 together are (CH2) m to form a saturated heterocycle; R5 is chosen from OH, alkoxy, alkyl, halogen, or OC(O)W; R6 is chosen from H, halogen, or (un)substituted alkyl; R7 and R8 are H or alkyl; W is (un) substituted alkyl, NR7R8, NR7CH2(CH2)nNR7R8, O-alkyl, or (un)substituted alkenyl; m is 3 or 4; n is 2 or 3; A is a 5- to 7-membered ring optionally containing one heteroatom

chosen from NR7, O, or S; X is either N or C; Y and Z are either N or C, wherein Y and Z are different; and the dashed bonds denote a suitably appointed single and double bond; or pharmaceutically acceptable salts or solvates thereof]. Nine specific compds. I are claimed per se, and these compds. plus 13 addnl. unprepd. compds. are claimed in corresponding methods of lowering intraocular pressure or treating glaucoma. instance, title compound II.2HCl was prepared in 8 steps from 1-amino-5,6,7,8-tetrahydronaphthalene (III). The sequence involved: (1) nitration of III in the 2- and 3-positions; (2) diazotization with cyclization to give a benzopyrazole ring; (3) N-alkylation with propylene oxide; (4) hydrogenation of the nitro group to amino; (5) diazotization and hydroxylation of the formed amino group; (6) benzylation of the formed phenolic hydroxy group; (7) mesylation of the alkanolic hydroxy group and conversion to the azide; and (8) hydrogenation of the azide and acidification. II.2HCl bound to rat cortical 5-HT2 receptors in vitro with an IC50 of 0.714 nM, vs. 0.941 for 5-HT itself. This compound also showed agonist activity at rat vascular 5-HT2 receptors in a phosphoinositide turnover assay, and reduced intraocular pressure in conscious cynomolgus monkeys by about 20% for at least 6 h at a dose of 300 μg (topical). indazole indole prepn 5HT2 receptor agonist antagonist treatment glaucoma; serotoninergic agonist antagonist indazole indole prepn intraocular antihypertensive 5-HT agonists 5-HT antagonists (5-HT2A; preparation of novel fused indazoles and indoles with 5-HT2 receptor activity for use in the treatment of glaucoma) 5-HT receptors RL: BSU (Biological study, unclassified); BIOL (Biological study) (binding to; preparation of novel fused indazoles and indoles with 5-HT2 receptor activity for use in the treatment of glaucoma) 5-HT agonists 5-HT antagonists Antiglaucoma agents Antihypertensives (preparation of novel fused indazoles and indoles with 5-HT2 receptor activity for use in the treatment of glaucoma) Hypertension (treatment of intraocular; preparation of novel fused indazoles and indoles with 5-HT2 receptor activity for use in the treatment of glaucoma) Glaucoma (disease) (treatment of; preparation of novel fused indazoles and indoles with 5-HT2 receptor activity for use in the treatment of glaucoma) 5-HT receptors RL: BSU (Biological study, unclassified); BIOL (Biological study) (type 5-HT2, binding to; preparation of novel fused indazoles and indoles with 5-HT2 receptor activity for use in the treatment of glaucoma) 477965-61-0P, 2-(2-Aminopropyl)-2,6,7,8-tetrahydrobenzo[cd]indazol-4-ol 477965-62-1P, 2-(2-Dimethylaminoethyl)-2,6,7,8-tetrahydrobenzo[cd]indazol-477965-63-2P, 2-(2-Aminopropyl)-5-methyl-2,6,7,8-477965-64-3P, 2-(2-Aminopropyl)-5-fluorotetrahydrobenzo[cd]indazol-4-ol 2,6,7,8-tetrahydrobenzo[cd]indazol-4-ol 477965-65-4P, 2-(6-Fluoro-7-methoxy-4,5-dihydro-3H-benzo[cd]indazol-1-yl)-1-477965-66-5P, Cyclopropanecarboxylic acid methylethylamine 2-(2-aminopropyl)-2,6,7,8-tetrahydrobenzo[cd]indazol-4-yl ester 477965-67-6P, 1-(2-Aminopropyl)-1,3,4,5-tetrahydrobenzo[cd]indol-7-ol 477965-68-7P, 1-(2-Aminopropyl)-5H-pyrano[4,3,2-cd]indazol-7-ol 477965-69-8P, 1-(2-Aminopropyl)-4-methyl-1,3,4,5-tetrahydropyrazolo[4,3,2-477965-70-1P, 2-(2-Aminopropyl)-2,6,7,8de]isoquinolin-7-ol tetrahydrobenzo[cd]indazol-4-ol dihydrochloride 477965-71-2P, 2-(2-Aminopropyl)-2,6,7,8-tetrahydrobenzo[cd]indazol-3-ol dihydrochloride

RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES

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(Uses)
        (drug candidate; preparation of novel fused indazoles and indoles with 5-HT2
        receptor activity for use in the treatment of glaucoma)
IT
     477965-95-0, 1-(2-Aminopropyl)-1,7,8,9-tetrahydropyrano[2,3-g]indazol-8-ol
     477965-97-2, 1-((S)-2-Aminopropyl)-1,7,8,9-tetrahydropyrano[2,3-g]indazol-
            477965-99-4, (R)-1-((S)-2-Aminopropyl)-1,7,8,9-tetrahydropyrano[2,3-
                     477966-02-2, (S)-1-((S)-2-Aminopropyl)-1,7,8,9-
     tetrahydropyrano[2,3-q]indazol-8-ol
                                           477966-04-4, 1-((S)-2-Aminopropyl)-3-
     methyl-1,7,8,9-tetrahydropyrano[2,3-q]indazol-8-ol
                                                          477966-06-6,
     1-((S)-1-Pyrrolidin-2-ylmethyl)-1,7,8,9-tetrahydropyrano[2,3-q]indazol-8-
          477966-08-8, 1-((S)-2-Aminopropyl)-5-fluoro-1,7,8,9-
     tetrahydropyrano[2,3-g]indazol-8-ol
                                          477966-10-2, [1-((S)-2-Aminopropyl)-
     1,7,8,9-tetrahydropyrano[2,3-g]indazol-8-yl]dimethylamine
                                                                 477966-11-3,
     [1-((S)-2-Aminopropyl)-1,7,8,9-tetrahydropyrano[2,3-g]indazol-8-
     yl]methanol
                   477966-13-5, 1-(2-Aminopropyl)-3,7,8,9-tetrahydropyrano[3,2-
     elindazol-8-ol
                      477966-15-7, 1-(Pyrrolidin-2-ylmethyl)-3,7,8,9-
     tetrahydropyrano[3,2-e]indazol-8-ol
                                           477966-17-9, 1-((S)-2-Aminopropyl)-
     3,7,8,9-tetrahydropyrano[3,2-e]indazol-8-ol
                                                  477966-19-1,
     1-((S)-2-Aminopropyl)-3-methyl-3,7,8,9-tetrahydropyrano[3,2-e]indazol-8-ol
     RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL
     (Biological study); USES (Uses)
        (drug candidate; preparation of novel fused indazoles and indoles with 5-HT2
        receptor activity for use in the treatment of glaucoma)
IT
     50536-99-7P, 3-Nitro-5,6,7,8-tetrahydronaphthalen-1-ylamine
                                                                  '78422-66-9P,
     2-Nitro-5,6,7,8-tetrahydronaphthalen-1-ylamine
                                                      477965-72-3P,
     7-Nitro-1,3,4,5-tetrahydrobenzo[cd]indazole
                                                   477965-73-4P,
     1-(7-Nitro-4,5-dihydro-3H-benzo[cd]indazol-1-yl)propan-2-ol
     477965-75-6P, 1-(7-Amino-4,5-dihydro-3H-benzo[cd]indazol-1-yl)propan-2-ol
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     477965-79-0P, 1-(7-Benzyloxy-4,5-dihydro-3H-benzo[cd]indazol-1-yl)propan-2-
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                                  477965-83-6P, 8-Nitro-1,3,4,5-
                                  477965-85-8P, 1-(8-Nitro-4,5-dihydro-3H-
     tetrahydrobenzo(cd)indazole
     benzo[cd]indazol-1-yl)propan-2-ol 477965-87-0P, 1-(8-Amino-4,5-dihydro-
     3H-benzo[cd]indazol-1-yl)propan-2-ol 477965-89-2P, 2-(2-Hydroxypropyl)-
     2,6,7,8-tetrahydrobenzo[cd]indazol-3-ol
                                              477965-91-6P,
     1-(8-Benzyloxy-4,5-dihydro-3H-benzo[cd]indazol-1-yl)propan-2-ol
     477965-93-8P, 1-(2-Azidopropyl)-8-benzyloxy-1,3,4,5-
     tetrahydrobenzo[cd]indazole
     RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
     (Reactant or reagent)
        (intermediate; preparation of novel fused indazoles and indoles with 5-HT2
        receptor activity for use in the treatment of glaucoma)
TT
     75-56-9, Propylene oxide, reactions
                                           100-39-0, Benzyl bromide
     2217-41-6, 1-Amino-5,6,7,8-tetrahydronaphthalene
     RL: RCT (Reactant); RACT (Reactant or reagent)
        (starting material; preparation of novel fused indazoles and indoles with
        5-HT2 receptor activity for use in the treatment of glaucoma)
              THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE.CNT
RE
(1) Flaugh; US 5385928 A 1995 HCAPLUS
     477965-81-4P, 1-(2-Azidopropyl)-7-benzyloxy-1,3,4,5-
     tetrahydrobenzo[cd]indazole
     RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
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RN
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CN
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     (9CI) (CA INDEX NAME)
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L13
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AN
DN
     140:229446
     Entered STN: 14 Mar 2004
ED
     Method using heterocyclic carboxamide compounds for preventing or treating
TI
     atherosclerosis or restenosis
     Wathen, Michael W.; Wathen, Lynne K.
IN
     Pharmacia & Upjohn Company, USA
PA
SO
     PCT Int. Appl., 110 pp.
     CODEN: PIXXD2
DT
     Patent
LΑ
     English
IC
     ICM A61K031-435
     ICS A61K031-4745; A61P009-10
     1-8 (Pharmacology)
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WO 2004019939
                ICM
                       A61K031-4745; A61P009-10
                ICS
os
     MARPAT 140:229446
     The invention provides a method of treating atherosclerosis or restenosis
AΒ
     in a mammal which comprises administering an effective amount of a
     thieno[2,3-b]pyridine carboxamide derivative or a pyrrolo[3,2,1-ij]quinoline
     carboxamide derivative
ST
     thienopyridine carboxamide deriv atherosclerosis restenosis treatment;
     pyrroloquinoline carboxamide deriv atherosclerosis restenosis treatment
IT
     Antiarteriosclerotics
        (antiatherosclerotics; heterocyclic carboxamide compds. for preventing
```

or treating atherosclerosis or restenosis)

IT

Atherosclerosis

Cardiovascular agents Human (heterocyclic carboxamide compds. for preventing or treating atherosclerosis or restenosis) IT Drug delivery systems (oral; heterocyclic carboxamide compds. for preventing or treating atherosclerosis or restenosis) TT Drug delivery systems (parenterals; heterocyclic carboxamide compds. for preventing or treating atherosclerosis or restenosis) IT Drug delivery systems (prodrugs; heterocyclic carboxamide compds. for preventing or treating atherosclerosis or restenosis) IT Artery, disease (restenosis; heterocyclic carboxamide compds. for preventing or treating atherosclerosis or restenosis) IT Drug delivery systems (topical; heterocyclic carboxamide compds. for preventing or treating atherosclerosis or restenosis) IT Drugs (veterinary; heterocyclic carboxamide compds. for preventing or treating atherosclerosis or restenosis) 292143-58-9 292143-61-4 IT 292143-52-3 292143-55-6 292143-49-8 292143-66-9 292143-67-0 292143-68-1 292143-64-7 292143-65-8 292143-74-9 292143-71-6 292143-72-7 292143-76-1 292143-70-5 292143-85-2 292143-86-3 292143-78-3 292143-79-4 292143-83-0 292143-94-3 292143-96-5 292143-98-7 292143-92-1 292143-90-9 292144-02-6 292144-04-8 292144-06-0 292144-07-1 292144-00-4 292144-12-8 292144-13-9 292144-09-3 292144-10-6 292144-08-2 292144-16-2 292144-17-3 292144-18-4 292144-14-0 292144-15-1 292144-21-9 292144-22-0 292144-23-1 292144-19-5 292144-20-8 292144-26-4 292144-27-5 292144-28-6 292144-24-2 292144-25-3 292144-32-2 388121-63-9 292144-29-7 292144-30-0 292144-31-1 388121-76-4 388121-74-2 388121-77-5 388121-67-3 388121-75-3 388121-80-0 388121-82-2 388121-79-7 388121-81-1 388121-78-6 388121-86-6 388121-87-7 388121-88-8 388121-89-9 388121-85-5 388121-94-6 388121-96-8 388121-93-5 388121-95-7 388121-97-9 388121-99-1 388122-01-8 388122-00-7 388122-02-9 388121-98-0 388122-06-3 388122-04-1 388122-05-2 388122-07-4 388122-03-0 388122-11-0 388122-12-1 388122-09-6 388122-10-9 388122-08-5 388122-13-2 388122-14-3 388122-15-4 388122-18-7 388122-16-5 388122-17-6 388122-20-1 388122-25-6 388122-24-5 388122-21-2 388122-22-3 388122-23-4 388122-27-8 388122-29-0 388122-30-3 388122-26-7 388122-28-9 388122-31-4 388122-32-5 388122-33-6 RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses) (heterocyclic carboxamide compds. for preventing or treating atherosclerosis or restenosis) THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD RE.CNT RE (1) Ke, C; US 2002055636 A1 2002 HCAPLUS (2) Lemstrom, K; CIRCULATION 1994, V90(4), P1969 HCAPLUS (3) O'Connor, S; EMERGING INFECTIOUS DISEASES 2001, V7(5), P780 MEDLINE (4) Romines, K; WO 03059912 A 2003 HCAPLUS (5) Scott, A; US 6239142 B1 2001 HCAPLUS (6) Shnute, M; WO 03059911 A 2003 HCAPLUS (7) Up John Co; WO 03020729 A 2003 HCAPLUS (8) Zhou; NEW ENGLAND JOURNAL OF MEDICINE 1996, 335, P624 TT 388122-12-1 388122-13-2 388122-14-3 388122-15-4 388122-16-5

RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL

(Biological study); USES (Uses)

(heterocyclic carboxamide compds. for preventing or treating atherosclerosis or restenosis)

RN 388122-12-1 HCAPLUS

CN 6H-Pyrrolo[3,2,1-ij]quinoline-5-carboxamide, N-[(4-chlorophenyl)methyl]-1[2-(4-morpholinyl)ethyl]-8-(4-morpholinylmethyl)-6-oxo- (9CI) (CA INDEX NAME)

$$\begin{array}{c|c} & & & \\ & & & \\ \hline \\ & & \\ \end{array}$$

RN 388122-13-2 HCAPLUS

CN 6H-Pyrrolo[3,2,1-ij]quinoline-5-carboxamide, N-[(4-chlorophenyl)methyl]-8-(4-morpholinylmethyl)-6-oxo-1-[2-(4-thiomorpholinyl)ethyl]- (9CI) (CA INDEX NAME)

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RN 388122-14-3 HCAPLUS

CN 6H-Pyrrolo[3,2,1-ij]quinoline-5-carboxamide, N-[(4-chlorophenyl)methyl]-1-[2-(1,1-dioxido-4-thiomorpholinyl)ethyl]-8-(4-morpholinylmethyl)-6-oxo-(9CI) (CA INDEX NAME)

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RN 388122-15-4 HCAPLUS

CN 6H-Pyrrolo[3,2,1-ij]quinoline-5-carboxamide, N-[(4-chlorophenyl)methyl]-1[2-(4-methyl-1-piperazinyl)ethyl]-8-(4-morpholinylmethyl)-6-oxo- (9CI)
(CA INDEX NAME)

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RN388122-16-5 HCAPLUS

TJ, TM

EP 1385505

6H-Pyrrolo[3,2,1-ij]quinoline-5-carboxamide, N-[(4-chlorophenyl)methyl]-8-CN (4-morpholinylmethyl)-6-oxo-1-[2-(1-piperazinyl)ethyl]- (9CI) (CA INDEX NAME)

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RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG 20040204 EP 2002-730223

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L13
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AN
     137:346175
DN
     Entered STN: 07 Nov 2002
ED
     Use of lipoxygenase inhibitors for the treatment of acne
TI
     Zouboulis, Christos C.
IN
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     Germany
SO
     Ger. Offen., 6 pp.
     CODEN: GWXXBX
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     1-7 (Pharmacology)
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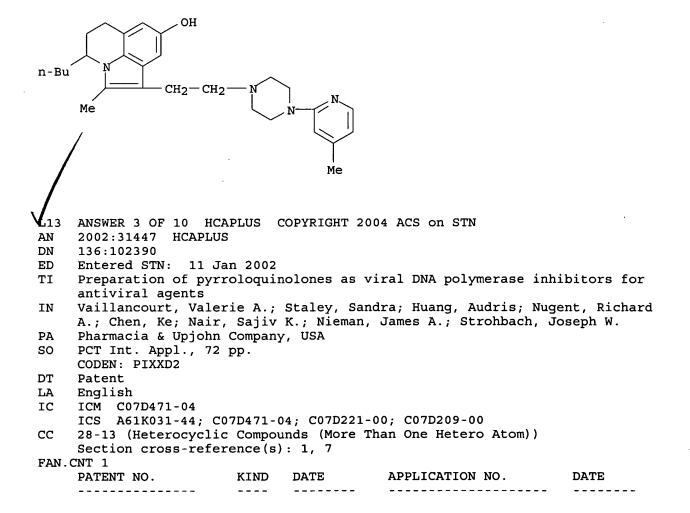
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                         4C091/NN01; 4C091/PA02; 4C091/PB01; 4C091/QQ02;
                         4C091/QQ05; 4C091/QQ15; 4C206/AA01; 4C206/AA02;
                         4C206/CA09; 4C206/CB03; 4C206/DA12; 4C206/KA01;
                         4C206/MA01; 4C206/MA04; 4C206/MA21; 4C206/MA72;
                         4C206/MA83; 4C206/ZA89; 4C206/ZB11; 4C206/ZC23
     The invention discloses the use of lipoxygenase inhibitors for the
AB
     treatment of acne, in particular inflammatory acne. The lipoxygenase
     inhibitor can be used alone or into combination with other lipoxygenase
     inhibitors or with further anti-acne agents in a suitable pharmaceutical
     composition, in particular via oral and/or local topical application.
ST
     lipoxygenase inhibitor acne pharmaceutical; inflammatory acne
     pharmaceutical lipoxygenase inhibitor
IT
     Hydrazones
     RL: RCT (Reactant); RACT (Reactant or reagent)
         (aromatic; lipoxygenase inhibitors for treatment of acne)
 IT
     Chamomile
         (extract; lipoxygenase inhibitors for treatment of acne)
IT
     Inflammation
         (inflammatory acne; lipoxygenase inhibitors for treatment of acne)
TΤ
     Anti-inflammatory agents
     Drug delivery systems
     Human
         (lipoxygenase inhibitors for treatment of acne)
 IT
     Retinoids
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         (lipoxygenase inhibitors for treatment of acne)
 IT
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         (lipoxygenase inhibitors for treatment of acne)
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     Drug delivery systems
         (oral; lipoxygenase inhibitors for treatment of acne)
 ΙT
     Fatty acids, biological studies
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        (CHF 1909; lipoxygenase inhibitors for treatment of acne)
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     (Biological study); USES (Uses)
        (CI 987; lipoxygenase inhibitors for treatment of acne)
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        (CMI 568; lipoxygenase inhibitors for treatment of acne)
     137945-48-3, CT 3
ΙT
     RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL
     (Biological study); USES (Uses)
        (CT 3; lipoxygenase inhibitors for treatment of acne)
IT
     146935-39-9, Epocarbazolin A
     RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL
     (Biological study); USES (Uses)
        (Epocarbazolin A; lipoxygenase inhibitors for treatment of acne)
IT
     147317-96-2, Nitrosoxacin A
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     (Biological study); USES (Uses)
        (Nitrosoxacin A; lipoxygenase inhibitors for treatment of acne)
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        (TMK 789; lipoxygenase inhibitors for treatment of acne)
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        (lipoxygenase inhibitors for treatment of acne)
             THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE.CNT
RE
(1) Anon; US 5142095 A HCAPLUS
(2) Anon; US 5196431 A HCAPLUS
(3) Anon; US 5356898 A HCAPLUS
(4) Anon; DE 69004081 T2
(5) Anon; WO 9108744 A HCAPLUS
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     (Biological study); USES (Uses)
        (lipoxygenase inhibitors for treatment of acne)
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     methyl-2-pyridinyl)-1-piperazinyl]ethyl]- (9CI) (CA INDEX NAME)
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 US 2003153561
     MARPAT 136:102390
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$$R^{5}$$
 R^{4}
 R^{2}
 R^{2}
 R^{2}

GI

The present invention provides compds. of formula [I; R1 = F,Cl, Br, cyano,NO2; R2, R3 = H, halo, OR11, COR7, CO2R11, C3-8 cycloalkyl, partially (un)saturated and optionally substituted C1-7 alkyl; R4, R5 = H, halo, aryl, S(Om)R7, COR7, CO2R10, cyano, heterocyclyl, OR11, heterocyclyloxy, (un)substituted NH2, SR11, heterocyclylthio, NHCOR13, NHSO2R13, C3-8 cycloalkyl, partially (un)saturated and optionally substituted C1-7 alkyl; R6 = H, halo, C3-8 cycloalkyl, C1-4 alkyl optionally substituted by 1-3 halo; wherein R7 = C1-7 alkyl, C3-8 cycloalkyl, (un)substituted NH2, aryl, heterocyclyl; R10 = aryl, heterocyclyl, C3-8

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cycloalkyl, partially (un) saturated and optionally substituted C1-7 alkyl; R11
= H, aryl, C3-8 cycloalkyl, C1-7 alkyl optionally substituted by OH; R13 =
H, aryl, C3-8 cycloalkyl, optionally substituted C1-7 alkyl], or
pharmaceutically acceptable salts, racemates, solvates, tautomers, optical
isomers, or prodrug derivs. thereof. These compds. are useful as
antiviral agents, in particular, as agents against viruses of the herpes
family including herpes simplex virus type 1, herpes simplex virus type 2,
varicella zoster virus, cytomegalovirus, Epstein-Barr virus, human
herpesvirus 6, human herpesvirus 7, human herpesvirus 8, or other human
herpesviruses. Thus, a solution of N-(4-chlorobenzyl)-4-hydroxy-8-iodo-6-
(tetrahydro-2H-pyran-4-ylmethyl)-3-quinolinecarboxamide (0.16 g),
PdC12(PPh3)2, CuI (0.018 g) and 3-butyn-1-ol (0.03 mL) in 15 mL Et2NH was
stirred at room temperature for 7 days to give 71% N-(4-Chlorobenzyl)-2-(2-
hydroxyethyl)-6-oxo-8-(tetrahydro-2H-pyran-4-ylmethyl)-6H-pyrrolo[3,2,1-
ij]quinoline-5-carboxamide (II). II in vitro showed IC50 of 0.13, 0.14,
and 0.1 µM against cytomegalovirus polymerase, herpes simplex virus
polymerase, and varicella zoster virus, resp.
pyrroloquinolinecarboxamide prepn antiviral; pyrroloquinolone prepn viral
DNA polymerase inhibitor; antiviral agent herpesvirus pyrroloquinolone
Antiviral agents
Cytomegalovirus
Human herpesvirus 1
Human herpesvirus 2
Human herpesvirus 3
Human herpesvirus 4
Human herpesvirus 6
Human herpesvirus 7
Human herpesvirus 8
   (preparation of pyrroloquinolones as viral DNA polymerase inhibitors for
   antiviral agents against human herpesviruses)
9012-90-2, DNA polymerase
RL: BSU (Biological study, unclassified); BIOL (Biological study)
   (cytomegalovirus, herpes simplex virus polymerase, and varicella zoster
   virus; preparation of pyrroloquinolones as viral DNA polymerase inhibitors
   for antiviral agents)
2767-70-6P, (4-Nitrobenzyl)triphenylphosphonium bromide
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                              14044-59-8P, 4-Pent-4-ynylmorpholine
4-(4-Nitrobenzyl)morpholine
                            15240-89-8P 29777-09-1P
              14731-39-6P
                                                       51013-67-3P,
14256-74-7P
                              62875-84-7P, Ethyl 4-amino-3-iodobenzoate
4-(4-Aminobenzyl) morpholine
281652-22-0P, 4-(4-Nitrobenzylidene)tetrahydro-2H-pyran
                                                          388121-64-0P
               388121-66-2P
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388121-71-9P
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RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
(Reactant or reagent)
   (intermediate; preparation of pyrroloquinolones as viral DNA polymerase
   inhibitors for antiviral agents)
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RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU
(Therapeutic use); BIOL (Biological study); PREP (Preparation); USES
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ST

IT

ΙT

TT

(Uses)

(preparation of pyrroloquinolones as viral DNA polymerase inhibitors for antiviral agents)

94-09-7, Ethyl 4-aminobenzoate 87-13-8, Diethyl ethoxymethylenemalonate IT 100-11-8, 4-Nitrobenzyl bromide 104-86-9, 4-Chlorobenzylamine 110-91-8, Morpholine, reactions 603-35-0, 107-19-7, Propargyl alcohol Triphenylphosphine, reactions 627-41-8, Methyl propargyl ether 927-74-2, 3-Butyn-1-ol 927-74-2D, 3-Butyn-1-ol, sulfonated polymer-supported 5221-62-5, Prop-2-ynylurea 5390-04-5, 4-Pentyn-1-ol 5651-88-7, Phenyl propargyl sulfide 7223-38-3, 1-Dimethylamino-2-propyne 10442-03-2 29943-42-8, Tetrahydro-4H-pyran-4-one 35161-71-8, N-Methylpropargylamine 42969-65-3, (R)-(+)-3-Butyn-2-ol 281652-42-4

RL: RCT (Reactant); RACT (Reactant or reagent)

(reactant: preparation of pyrrologuinologes as w

(reactant; preparation of pyrroloquinolones as viral DNA polymerase inhibitors for antiviral agents)

RE.CNT 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD RE

- (1) Chiroscience Ltd; WO 9730999 A 1997 HCAPLUS
- (2) Chiroscience Ltd; WO 9731000 A 1997 HCAPLUS
- (3) Gerster, J; US 3917609 A 1975 HCAPLUS
- (4) Strohbach, J; WO 9932450 A 1999 HCAPLUS
- (5) Strohbach, J; WO 0040561 A 2000 HCAPLUS
- IT 388122-12-1P 388122-13-2P 388122-14-3P

388122-15-4P 388122-16-5P

RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(preparation of pyrroloquinolones as viral DNA polymerase inhibitors for antiviral agents)

RN 388122-12-1 HCAPLUS

CN 6H-Pyrrolo[3,2,1-ij]quinoline-5-carboxamide, N-[(4-chlorophenyl)methyl]-1[2-(4-morpholinyl)ethyl]-8-(4-morpholinylmethyl)-6-oxo- (9CI) (CA INDEX NAME)

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RN 388122-13-2 HCAPLUS

CN 6H-Pyrrolo[3,2,1-ij]quinoline-5-carboxamide, N-[(4-chlorophenyl)methyl]-8-(4-morpholinylmethyl)-6-oxo-1-[2-(4-thiomorpholinyl)ethyl]- (9CI) (CA INDEX NAME)

RN 388122-14-3 HCAPLUS

CN 6H-Pyrrolo[3,2,1-ij]quinoline-5-carboxamide, N-[(4-chlorophenyl)methyl]-1[2-(1,1-dioxido-4-thiomorpholinyl)ethyl]-8-(4-morpholinylmethyl)-6-oxo(9CI) (CA INDEX NAME)

$$\begin{array}{c|c} & & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & &$$

RN 388122-15-4 HCAPLUS

CN 6H-Pyrrolo[3,2,1-ij]quinoline-5-carboxamide, N-[(4-chlorophenyl)methyl]-1-[2-(4-methyl-1-piperazinyl)ethyl]-8-(4-morpholinylmethyl)-6-oxo- (9CI) (CA INDEX NAME)

$$\begin{array}{c|c} & & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & \\ & & & \\ & &$$

RN 388122-16-5 HCAPLUS

CN 6H-Pyrrolo[3,2,1-ij]quinoline-5-carboxamide, N-[(4-chlorophenyl)methyl]-8-(4-morpholinylmethyl)-6-oxo-1-[2-(1-piperazinyl)ethyl]-(9CI) (CA INDEX NAME)

L13 ANSWER 4 OF 10 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 2001:453066 HCAPLUS

DN 135:61239

ED Entered STN: 22 Jun 2001

Preparation of 11H,12H,14H-pyrrolo[3,4-c]quinolino[8',8a',1':3,2,1]-pyrrolo[2,3-a]carbazole-5,7-diones for the treatment of proliferative diseases

IN Al-Awar, Rima Salim; Hecker, Kyle Andrew; Huang, Jianping; Joseph, Sajan;

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Li, Tiechao; Paal, Michael; Rathnachalam, Radhakrishnan; Ray, James
    Edward; Shih, Chuan; Waid, Philip Parker; Zhou, Xun; Zhu, Guoxin
PA
    Eli Lilly and Company, USA
SO
    PCT Int. Appl., 261 pp.
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    English
    ICM C07D471-06
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* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB The title compds. [I; A, B = O, S; X, Y = H; or X and Y, taken together, form a bond; R1 = H, alkyl; R2 = halo, CN, alkyl, etc.; R3 = aryl, heteroaryl, etc.; R4 = H, alkyl, etc.; R5 = halo, CN, alkyl, etc.; R6 = alkyl; R7 = alkoxycarbonyl, (CH2)mZ (m = 0-5; Z = halo, OH, etc.); Q1 = O, SOn (n = 0-2), (CH2)1-3; Q2 = carbon-carbon single or double bond, etc.; Q3 = (CH2)1-3], useful for inhibiting CDK4, were prepared and formulated. E.g., a multi-step synthesis of II which showed activity (0.1055 μM) in assay of cyclin D1-CDK4 kinase with the ING peptide as substrate, and also was found to inhibit cell growth and Rb (retinoblastoma protein) phosphorylation, was given.

345262-86-4P

345262-83-1P

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pyrroloquinolinopyrrolocarbazoledione prepn formulation antitumor cyclin
ST
     dependent kinase CDK4 inhibitor; retinoblastoma protein phosphorylation
     inhibitor pyrroloquinolinopyrrolocarbazoledione prepn formulation
IT
     Transcription factors
     RL: BSU (Biological study, unclassified); MSC (Miscellaneous); BIOL
     (Biological study)
        (Rb, phosphorylation of; preparation of 11H,12H,14H-pyrrolo[3,4-
        c]quinolino[8',8a',1':3,2,1]-pyrrolo[2,3-a]carbazole-5,7-diones for the
        treatment of proliferative diseases)
IT
     Antitumor agents
     Cyclin dependent kinase inhibitors
        (preparation of 11H,12H,14H-pyrrolo[3,4-c]quinolino[8',8a',1':3,2,1]-
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     (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT
     (Reactant or reagent); USES (Uses)
        (preparation of 11H,12H,14H-pyrrolo[3,4-c]quinolino[8',8a',1':3,2,1]-
        pyrrolo[2,3-a]carbazole-5,7-diones for the treatment of proliferative
        diseases)
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study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use);
BIOL (Biological study); PREP (Preparation); USES (Uses)
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147014-97-9
RL: BSU (Biological study, unclassified); MSC (Miscellaneous); BIOL
(Biological study)
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67-64-1, Acetone, reactions 70-23-5, Ethyl bromopyruvate
                                                            106-95-6,
Allyl bromide, reactions 107-11-9, Allylamine
                                                 109-85-3,
                      110-89-4, Piperidine, reactions
                                                         110-91-8,
(2-Methoxyethyl)amine
Morpholine, reactions
                       123-75-1, Pyrrolidine, reactions
                                                          123-90-0.
Thiomorpholine 156-87-6, Propanolamine
                                         328-50-7, 2-Ketoglutaric acid
                    529-34-0, \alpha-Tetralone 534-03-2,
503-29-7, Azetidine
2-Amino-1,3-propanediol 580-15-4, 6-Aminoquinoline
                   611-34-7, 5-Aminoquinoline
                                                612-57-7.
4-Aminopyrimidine
                   612-61-3, 7-Chloroquinoline
                                                 616-30-8,
6-Chloroquinoline
2,3-Dihydroxypropylamine 617-35-6, Ethyl pyruvate
                                                   635-46-1,
                            687-64-9, Lysine methyl ester
                                                             879-37-8,
1,2,3,4-Tetrahydroquinoline
                      1074-88-0, Indole-7-carboxaldehyde
                                                            1119-51-3,
(Indol-3-yl)acetamide
5-Bromo-1-pentene 1215-59-4, 5-Benzyloxyindole
                                                  1670-82-2,
Indole-6-carboxylic acid 1692-25-7, Pyridine-3-boronic acid
                                                               1765-93-1,
                                        3395-91-3, Methyl
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4-Fluorobenzeneboronic acid
3-bromopropionate 3886-08-6 4330-21-6, 3,5-Di-O-(p-toluy1)-2-deoxy-
                           4363-93-3, Quinoline-4-carboxaldehyde
α-D-ribofuranosyl chloride
4530-20-5, N-tert-Butoxycarbonylglycine
                                        4795-29-3, 2-
(Aminomethyl) tetrahydrofuran 4897-84-1, Methyl 4-bromobutyrate
5325-20-2, 2H-1,4-Benzothiazin-3(4H)-one 5470-96-2, Quinoline-2-
                7284-37-9, 1-Amino-1-deoxy-β-D-glucose 7531-52-4,
carboxaldehyde
               7633-56-9, N-Aminoindoline
                                           13515-97-4, DL-Alanine methyl
L-Prolinamide
                    14465-61-3, 1,2-Dihydro-2,2-dimethylquinoline
ester hydrochloride
15761-38-3, N-tert-Butoxycarbonyl-L-alanine 15861-36-6, 6-Cyanoindole
                                                      27578-60-5,
            23159-07-1, 1-(3-Aminopropyl)pyrrolidine
17114-97-5
                           39178-35-3 40149-67-5, DL-Aspartic acid
1-(2-Aminoethyl)piperidine
               40499-83-0, 3-Hydroxypyrrolidine
                                                  51417-51-7,
dimethyl ester
                               52415-29-9, 6-Bromoindole
                                                           56344-32-2
7-Bromo-1H-indole
                   51482-39-4
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            78304-53-7, 5-Phenoxyindole
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60537-19-1
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105454-25-9
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             150114-41-3, 1-Methylindole-3-acetamide 152213-62-2,
137049-00-4
6-Bromoindole-3-acetamide
                           169674-01-5, 5,6-Difluoroindole
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345265-03-4

345265-06-7

345265-07-8

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                                     394-69-4P, 5-Fluoroquinoline
209-78-9P, Pyrrolo[3,2,1-hi]indole
1075-26-9P, 1H-Indole-6-methanol
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1701-57-1P, 2,3,4,5-Tetrahydro-1H-benzo[b]azepine
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3349-64-2P
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5840-01-7P
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21005-51-6P
              22715-22-6P, 4,5-Dihydro-pyrrolo[3,2,1-hi]indole
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              116476-45-0P, 4,5,6,7-Tetrahydroazepino[3,2,1-hi]indole
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147621-16-7P, 6-(4-Fluorophenyl)indole
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(Reactant or reagent)
   (preparation of 11H, 12H, 14H-pyrrolo[3,4-c]quinolino[8',8a',1':3,2,1]-
   pyrrolo[2,3-a]carbazole-5,7-diones for the treatment of proliferative
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345264-52-0P, 1H-Indole-7-ethanol
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345264-47-3 HCAPLUS
4H-Pyrrolo[3,2,1-ij]quinoline-1-acetamide, 8-fluoro-5,6-dihydro-6,6-
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     135:61238
DN
     Entered STN: 22 Jun 2001
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     Preparation of maleimide and carbazole derivatives for the treatment of
TΙ
     proliferative diseases
    Al-Awar, Rima Salim; Hecker, Kyle Andrew; Huang, Jianping; Joseph, Sajan;
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     Ray, James Edward; Waid, Philip Parker
     Eli Lilly and Company, USA
PA
     PCT Int. Appl., 110 pp.
SO
     CODEN: PIXXD2
DT
     Patent
LA
     English
     ICM C07D403-14
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     ICS A61K031-407; A61P035-00
     27-11 (Heterocyclic Compounds (One Hetero Atom))
CC
     Section cross-reference(s): 1, 63
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CLASS
                CLASS PATENT FAMILY CLASSIFICATION CODES
 PATENT NO.
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 WO 2001044235
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                       C07D403-14
                ICS
                       A61K031-407; A61P035-00
US 2003092676
                ECLA
                       C07D487/22; C07D487/22; C07F007/18C4D4D
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     MARPAT 135:61238
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* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *
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The title compds. [I; A, B = O, S; X, Y = H; or X and Y, taken together, form a bond; R1 = H, alkyl; R5, R51 = halo, CN, alkyl, etc.; R6, R61 = alkyl; R7, R71 = alkoxycarbonyl, (CH2)mZ; Z = halo, OH, CO2H, etc.; Q1, Q6 = O, SOn, (CH2)1-3; Q2, Q5 = carbon-carbon single or double bond, NH, etc.; Q3, Q4 = (CH2)1-3; m = 0-5; n = 0-2], useful for inhibiting CDK4, were prepared and formulated. E.g., a multi-step synthesis of II.HCl which showed activity (0.6051 μM) in assay of cyclin D1-cdk4 kinase with the ING peptide as substrate, was given. Some of compds. I were found to inhibit cell growth and to inhibit Rb (retinoblastoma protein) phosphorylation.
```

ST cyclin dependent kinase CDK4 inhibitor maleimide carbazole prepn formulation; antitumor maleimide carbazole prepn formulation; retinoblastoma protein phosphorylation inhibitor maleimide carbazole prepn formulation

IT Transcription factors

RL: BSU (Biological study, unclassified); MSC (Miscellaneous); BIOL (Biological study)

(Rb, phosphorylation of; inhibitors; preparation of maleimide and carbazole derivs. for the treatment of proliferative diseases)

IT Antitumor agents

Cyclin dependent kinase inhibitors

(preparation of maleimide and carbazole derivs. for the treatment of proliferative diseases)

IT 345333-87-1P 345334-01-2P 345334-09-0P 345334-21-6P 345334-33-0P RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)

(preparation of maleimide and carbazole derivs. for the treatment of proliferative diseases)

345333-99-5P 345334-03-4P 345334-05-6P 345333-95-1P IT 345333-91-7P 345334-37-4P 345334-25-0P 345334-29-4P 345334-13-6P 345334-17-0P 345334-41-0P 345334-45-4P 345334-49-8P 345334-53-4P RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(preparation of maleimide and carbazole derivs. for the treatment of proliferative diseases)

IT 147014-97-9 166433-53-0

RL: BSU (Biological study, unclassified); MSC (Miscellaneous); BIOL (Biological study)

(preparation of maleimide and carbazole derivs. for the treatment of proliferative diseases)

70-23-5, Ethyl bromopyruvate 106-95-6, Allyl bromide, reactions IT 107-11-9, Allylamine 328-50-7, 2-Ketoglutaric acid 529-34-0, 580-15-4, 6-Aminoquinoline 611-34-7, α-Tetralone 612-57-7, 6-Chloroquinoline 612-61-3, 5-Aminoquinoline 617-35-6, Ethyl pyruvate 635-46-1, 7-Chloroquinoline 1,2,3,4-Tetrahydroquinoline 687-64-9, L-Lysine methyl ester 1215-59-4, 1119-51-3, 5-Bromo-1-pentene Indole-7-carboxaldehyde 1670-82-2, Indole-6-carboxylic acid 1692-25-7, 5-Benzyloxyindole Pyridine-3-boronic acid 1765-93-1, 4-Fluorobenzeneboronic acid 3395-91-3, Methyl 3-bromopropionate 3886-08-6 4363-93-3, Quinoline-4-carboxaldehyde 4897-84-1, Methyl 4-bromobutyrate 5325-20-2, 2H-1,4-Benzothiazin-3(4H)-one 5470-96-2, Quinoline-2-13515-97-4, DL-Alanine carboxaldehyde 7633-56-9, N-Aminoindoline methyl ester hydrochloride 14465-61-3, 1,2-Dihydro-2,2-dimethylquinoline 17114-97-5 51417-51-7, 7-Bromo-1H-indole 15861-36-6, 6-Cyanoindole 75315-63-8, N-51482-39-4 52415-29-9, 6-Bromoindole

```
78304-53-7, 5-Phenoxyindole
     (Benzyloxycarbonyl) succinimide
                                       189016-82-8
     169674-01-5, 5,6-Difluoroindole
                                                    345264-85-9
                                                                    345264-86-0
                   345264-91-7
                                 345264-92-8
                                               345265-10-3 345265-41-0
     345264-90-6
     345336-95-0
                   345337-08-8
     RL: RCT (Reactant); RACT (Reactant or reagent)
        (preparation of maleimide and carbazole derivs. for the treatment of
        proliferative diseases)
IT
     394-69-4P
                 1075-26-9P, 1H-Indole-6-methanol
                                                     1196-70-9P,
     1H-Indole-6-carboxaldehyde
                                  1701-57-1P
                                              3080-99-7P
                                                             3349-64-2P
                  5840-01-7P
                              20364-30-1P, 1,2,3,4-Tetrahydro-2,2-
                         21005-51-6P
                                       22715-22-6P
                                                      40971-36-6P
                                                                    46054-15-3P,
     dimethylquinoline
     1H-Indole-6-ethanamine
                              50820-65-0P
                                            59611-52-8P
                                                           62995-58-8P
                   90562-35-9P
                                 92108-32-2P
                                                92506-77-9P
                                                              94239-08-4P,
     67752-53-8P
                         98622-14-1P
                                       116476-45-0P
                                                       118726-60-6P
     7-Vinyl-1H-indole
                                   124730-56-9P
                                                  131849-21-3P
                                                                  141650-35-3P
     124730-53-6P
                    124730-54-7P
     147621-16-7P, 6-(4-Fluorophenyl)indole
                                              152712-40-8P
                                                              152712-44-2P
                    345232-22-6P
                                   345264-02-0P
                                                   345264-04-2P
     152712-45-3P
                                                                  345264-05-3P
                                                   345264-09-7P
     345264-06-4P
                    345264-07-5P
                                   345264-08-6P
                                                                  345264-10-0P
                                                   345264-14-4P
     345264-11-1P
                    345264-12-2P
                                   345264-13-3P
                                                                  345264-15-5P
                                                   345264-21-3P
     345264-16-6P
                    345264-19-9P
                                   345264-20-2P
                                                                  345264-22-4P
                                                   345264-26-8P
                                                                  345264-30-4P
     345264-23-5P
                    345264-24-6P
                                   345264-25-7P
                                                   345264-34-8P
                                                                  345264-35-9P
     345264-31-5P
                    345264-32-6P
                                   345264-33-7P
    345264-37-1P
                    345264-38-2P
                                   345264-39-3P
                                                   345264-40-6P
                                                                  345264-41-7P
     345264-42-8P
                    345264-43-9P
                                   345264-44-0P
                                                   345264-45-1P
                                                                  345264-46-2P
                    345264-48-4P
                                   345264-49-5P
                                                   345264-50-8P
     345264-47-3P
                    345264-52-0P, 1H-Indole-7-ethanol
                                                         345264-53-1P
     345264-51-9P
                    345264-55-3P
                                   345264-56-4P
                                                   345264-57-5P
                                                                  345264-58-6P
     345264-54-2P
                    345264-60-0P
                                   345264-61-1P
                                                   345264-62-2P
                                                                  345264-63-3P
     345264-59-7P
     345264-64-4P
                    345264-65-5P
                                   345264-66-6P
                                                   345264-67-7P
                                                                  345264-68-8P
     345264-70-2P
                    345264-71-3P
                                   345264-72-4P
                                                   345264-73-5P
                                                                  345264-74-6P
                    345264-78-0P
                                   345264-79-1P
                                                   345264-80-4P
                                                                  345264-81-5P
     345264-75-7P
                    345264-83-7P
                                   345264-84-8P
                                                  345334-99-8P
                                                                  345335-06-0P
     345264-82-6P
     345335-52-6P
                    345336-72-3P
                                   345336-85-8P
     RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
     (Reactant or reagent)
        (preparation of maleimide and carbazole derivs. for the treatment of
        proliferative diseases)
IT
     209-78-9P, Pyrrolo[3,2,1-hi]indole
                                          345264-69-9P
     RL: SPN (Synthetic preparation); PREP (Preparation)
        (preparation of maleimide and carbazole derivs. for the treatment of
        proliferative diseases)
IT
     345264-47-3P
     RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
     (Reactant or reagent)
        (preparation of maleimide and carbazole derivs. for the treatment of
        proliferative diseases)
RN
     345264-47-3 HCAPLUS
     4H-Pyrrolo[3,2,1-ij]quinoline-1-acetamide, 8-fluoro-5,6-dihydro-6,6-
CN
     dimethyl- (9CI) (CA INDEX NAME)
```

ANSWER 6 OF 10 HCAPLUS COPYRIGHT 2004 ACS on STN

2000:380069 HCAPLUS AN

DN 133:150448

ED Entered STN: 08 Jun 2000

Pyrrolo[3,2,1-ij]quinoline derivatives, 5-HT2c receptor agonists with ΤI selectivity over the 5-HT2a receptor: potential therapeutic applications for epilepsy and obesity

Isaac, Methvin; Slassi, Abdelmalik; O'Brien, Anne; Edwards, Louise; ΑU MacLean, Neil; Bueschkens, Donna; Lee, David K. H.; McCallum, Kirk; De Lannoy, Ines; Demchyshyn, Lidia; Kamboj, Rajender

NPS Allelix Corp., Mississauga, ON, L4V 1V7, Can. CS

Bioorganic & Medicinal Chemistry Letters (2000), 10(9), 919-921 SO CODEN: BMCLE8; ISSN: 0960-894X

Elsevier Science Ltd. PB

DTJournal

English LΑ

27-17 (Heterocyclic Compounds (One Hetero Atom)) CC Section cross-reference(s): 1, 28

ĢΙ

Title compds. I (R, R2, R3 = H, Me; R1 = H, F, Cl; X = CH2, S) were prepared AΒ and found to be agonists at 5-HT2c receptors with selectivity over 5-HT2a.

pyrroloquinolineethanamine deriv prepn 5HT2c receptor agonist ST

IT 5-HT receptors

> RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)

(5-HT2C; pyrroloquinolineethanamine derivs. as agonists of)

IT 287104-18-1P

> RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); RCT (Reactant); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent) (preparation and selective 5-HT2c receptor agonist activity of)

IT 33131-92-9P 40619-71-4P 287104-19-2P 287104-20-5P

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study); PREP (Preparation)

(preparation and selective 5-HT2c receptor agonist activity of) THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE.CNT

(1) Goldstein, S; Synthesis 1989, V221

(2) Grandberg, I; Khim Geterotsikl Soedin 1973, V2, P213

(3) Hoyer, D; Pharmacological Rev 1994, V46, P157 HCAPLUS

(4) Kahn, R; Biol Psychiat 1991, V30, P1139 HCAPLUS

(5) Martin, J; J Med Chem 1997, V40, P2762

(6) Martin, J; J Pharmacol Exp Ther 1998, V286, P913 HCAPLUS

(7) Steck, A; J Heterocycl Chem 1974, V11, P387

(8) Tecott, L; Nature 1995, V374, P542 HCAPLUS

(9) van Wijngaarden, I; Med Chem 1993, V36, P3693 HCAPLUS

(10) Watt, S; J Pharmacol Exp Ther 1996, V279, P1541

(11) Wright, D; J Comp Neurol 1995, V351, P357 HCAPLUS

IT 287104-18-1P RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); RCT (Reactant); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent) (preparation and selective 5-HT2c receptor agonist activity of)

RN 287104-18-1 HCAPLUS CN 4H-Pvrrolo[3,2,1-ij]

4H-Pyrrolo[3,2,1-ij]quinoline-1-ethanamine, 8-fluoro-5,6-dihydro-4-methyl-(9CI) (CA INDEX NAME)

IT 287104-19-2P 287104-20-5P

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)

(preparation and selective 5-HT2c receptor agonist activity of)

RN 287104-19-2 HCAPLUS

CN 4H-Pyrrolo[3,2,1-ij]quinoline-1-ethanamine, 8-fluoro-5,6-dihydro-2,4-dimethyl- (9CI) (CA INDEX NAME)

RN 287104-20-5 HCAPLUS

CN 4H-Pyrrolo[3,2,1-ij]quinoline-1-ethanamine, 8-fluoro-5,6-dihydro-N,4-dimethyl- (9CI) (CA INDEX NAME)

L13 ANSWER 7 OF 10 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 1995:352128 HCAPLUS

DN 122:160453

ED Entered STN: 15 Feb 1995

Synthesis, Structure-Activity Relationships, and Pharmacological Evaluation of Pyrrolo[3,2,1-ij]quinoline Derivatives: Potent Histamine and Platelet Activating Factor Antagonism and 5-Lipoxygenase Inhibitory Properties. Potential Therapeutic Application in Asthma

AU Paris, Dominique; Cottin, Michel; Demonchaux, Patrice; Augert, Guy; Dupassieux, Pierre; Lenoir, Patrick; Peck, Michael J.; Jasserand, Daniel

CS Laboratoires de Therapeutique Moderne, Solvay Pharma, Chatillon-sur-

Chalaronne, 01400, Fr.

SO Journal of Medicinal Chemistry (1995), 38(4), 669-85 CODEN: JMCMAR; ISSN: 0022-2623

PB American Chemical Society

DT Journal

LA English

CC 27-18 (Heterocyclic Compounds (One Hetero Atom))
Section cross-reference(s): 1

GΙ

$$\begin{array}{c|c} R & CH_2CH_2-N & N \\ \hline & N \\ \hline & Me \\ \hline & R1 \\ \end{array}$$

A series of pyrrolo[3,2,1-ij]quinoline derivs., e.g. I (R = H, Me NH2, AB cinnamoyl, benzyl; R1 = H, Bu) was synthesized and evaluated for their in vitro and in vivo activities against histamine, platelet activating factor (FAC), and leukotrienes which are recognized to be of importance in asthma. The structure-activity relationship studies have shown that the optimum moiety on the 1-position of the pyrroloquinoline nucleus is a 2-[4-(4-methyl-2-pyridinyl)-1-piperazinyl]ethyl chain in conjunction with a Me group on the 2-position for potent antagonism of both histamine and PAF. The introduction of substituents on the 8- and 4-positions was also investigated in order to increase the potency of 5-lipoxygenase inhibition while retaining or improving the activities against histamine and PAF. This series is exemplified by 4-n-butyl-5,6-dihydro-8-hydroxy-2-methyl-1- $\label{lem:condition} \hbox{$[2-[4-(4-methyl-2-pyridinyl)-1-piperazinyl]$ ethyl$]-$4$H-pyrrolo$[3,2,1-methyl-2-pyridinyl)-$1-piperazinyl$.}$ ij]quinoline (I, R = OH, R1 = Bu) (KC 11404) which was found to be active against all three of the selected mediators. KC 11404 was found to be orally active in guinea pig models against the histaminic phase of antigen-induced bronchospasm and PAF-induced bronchoconstriction (ED50 = 1.9 and 2.1 µmol/kg, resp.). When tested against the leukotriene-dependent phase of the antigen-induced bronchoconstriction, compound KC 11404 showed the same potency as zileuton.

Ι

ST pyridinylpiperazinylethylpyrroloquinoline prepn asthma treatment; histamine activating factor pyrroloquinoline; platelet activating factor pyrroloquinoline; lipoxygenase inhibitor pyrroloquinoline

IT Antihistaminics

(synthesis, structure-activity relationships, and pharmacol. evaluation of pyrroloquinolines for therapeutic application in asthma)

IT Bronchodilators

(antiasthmatics, synthesis, structure-activity relationships, and pharmacol. evaluation of pyrroloquinolines for therapeutic application in asthma)

IT Molecular structure-biological activity relationship
(asthma-inhibiting, synthesis, structure-activity relationships, and
pharmacol. evaluation of pyrroloquinolines for therapeutic application
in asthma)

IT 65154-06-5, Platelet Activating Factor

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)

(antagonists; synthesis, structure-activity relationships, and pharmacol. evaluation of pyrroloquinolines for therapeutic application in asthma)

```
80619-02-9, 5-Lipoxygenase
    RL: BAC (Biological activity or effector, except adverse); BSU (Biological
     study, unclassified); BIOL (Biological study)
        (inhibitors; synthesis, structure-activity relationships, and
       pharmacol. evaluation of pyrroloquinolines for therapeutic application
        in asthma)
IT
    148489-92-3P
                   148489-93-4P
                                   148489-94-5P
                                                  148489-95-6P
                                 148489-98-9P
                                                148489-99-0P
    148489-96-7P 148489-97-8P
     148490-04-4P
                   148490-08-8P 148490-10-2P
                                                148490-11-3P
     148490-12-4P 148490-14-6P
                                 148490-15-7P
                                                148490-25-9P
     148490-16-8P 148490-17-9P
                                 148490-23-7P
     148490-26-0P
                   148490-27-1P
                                   148490-28-2P
                                                  148490-29-3P 148490-31-7P
     148490-32-8P
                   148490-33-9P
                                   148490-56-6P 148490-60-2P
     148490-62-4P 148490-63-5P
                                148490-64-6P
                                                148490-65-7P
                   161151-01-5P
                                   161151-02-6P
                                                  161151-03-7P
     148490-66-8P
                                161151-06-0P 161151-07-1P
     161151-04-8P 161151-05-9P
                                                                 161151-12-8P
     161151-08-2P
                   161151-09-3P
                                   161151-10-6P
                                                  161151-11-7P
     161151-13-9P 161151-14-0P 161151-15-1P
     161151-16-2P 161151-17-3P 161151-18-4P
    RL: BAC (Biological activity or effector, except adverse); BSU (Biological
     study, unclassified); SPN (Synthetic preparation); BIOL (Biological
     study); PREP (Preparation)
        (synthesis, structure-activity relationships, and pharmacol. evaluation
       of pyrroloquinolines for therapeutic application in asthma)
IT.
     148490-22-6P
    RL: BAC (Biological activity or effector, except adverse); BSU (Biological
     study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use);
    BIOL (Biological study); PREP (Preparation); USES (Uses)
        (synthesis, structure-activity relationships, and pharmacol. evaluation
       of pyrrologuinolines for therapeutic application in asthma)
                                     91-62-3, 6-Methylquinoline
TΤ
     91-22-5, Quinoline, reactions
     2-Methylquinoline
                         5263-87-6
     RL: RCT (Reactant); RACT (Reactant or reagent)
        (synthesis, structure-activity relationships, and pharmacol. evaluation
       of pyrroloquinolines for therapeutic application in asthma)
                5825-45-6P 24005-23-0P
                                            27328-23-0P
                                                          40624-66-6P
IT
     1780-19-4P
                  66556-07-8P
                               83260-97-3P
                                              108248-90-4P
                                                              123612-50-0P
     54282-74-5P
                                   123629-22-1P
                                                  148490-36-2P
                                                                 148490-37-3P
                   123612-55-5P
     123612-53-3P
                                   148490-47-5P
                                                  149542-66-5P
                                                                 149542-67-6P
                   148490-45-3P
     148490-41-9P
     149542-75-6P
                   149542-80-3P
                                   161151-19-5P
                                                  161151-20-8P
                                                                 161151-21-9P
                                   161151-24-2P
                                                  161151-25-3P
                                                                 161151-26-4P
     161151-22-0P
                   161151-23-1P
                                   161151-29-7P
     161151-27-5P
                   161151-28-6P
                                                  161151-30-0P
                                                                 161151-31-1P
                                   161151-34-4P
                   161151-33-3P
                                                  161151-35-5P
                                                                 161151-36-6P
     161151-32-2P
                                   161151-39-9P
                                                  161151-40-2P
                                                                 161151-41-3P
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     161151-42-4P
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                   161151-48-0P
                                   161151-49-1P
                                                  161151-50-4P
                                                                 161151-51-5P
     161151-47-9P
                                                  161151-55-9P
                                                                 161151-56-0P
     161151-52-6P
                   161151-53-7P
                                   161151-54-8P
     161151-57-1P 161151-58-2P 161151-59-3P
     161151-60-6P 161151-61-7P 161151-62-8P
     161151-63-9P 161151-64-0P 161151-65-1P
     161151-66-2P 161151-67-3P 161151-68-4P
     RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
     (Reactant or reagent)
        (synthesis, structure-activity relationships, and pharmacol. evaluation
        of pyrrologuinolines for therapeutic application in asthma)
     148489-96-7P 148489-97-8P 148490-10-2P
IT
     148490-12-4P 148490-14-6P 148490-16-8P
     148490-17-9P 148490-60-2P 148490-62-4P
     148490-63-5P 148490-66-8P 161151-05-9P
     161151-13-9P 161151-14-0P 161151-15-1P
     161151-16-2P 161151-17-3P 161151-18-4P
     RL: BAC (Biological activity or effector, except adverse); BSU (Biological
     study, unclassified); SPN (Synthetic preparation); BIOL (Biological
```

study); PREP (Preparation)

(synthesis, structure-activity relationships, and pharmacol. evaluation of pyrroloquinolines for therapeutic application in asthma)

RN 148489-96-7 HCAPLUS

CN

4H-Pyrrolo[3,2,1-ij]quinoline, 5,6-dihydro-8-methoxy-2-methyl-1-[2-[4-(4-methyl-2-pyridinyl)-1-piperazinyl]ethyl]- (9CI) (CA INDEX NAME)

OMe
$$\mathsf{CH}_2-\mathsf{CH}_2-\mathsf{N}$$

RN 148489-97-8 HCAPLUS

CN 4H-Pyrrolo[3,2,1-ij]quinolin-8-ol, 5,6-dihydro-2-methyl-1-[2-[4-(4-methyl-2-pyridinyl)-1-piperazinyl]ethyl]- (9CI) (CA INDEX NAME)

RN 148490-10-2 HCAPLUS

CN 4H-Pyrrolo[3,2,1-ij]quinoline-8-methanol, 5,6-dihydro-2-methyl-α-(1-methylethyl)-1-[2-[4-(4-methyl-2-pyridinyl)-1-piperazinyl]ethyl]- (9CI) (CA INDEX NAME)

RN 148490-12-4 HCAPLUS

CN 4H-Pyrrolo[3,2,1-ij]quinoline, 5,6-dihydro-2-methyl-8-(2-methylpropyl)-1-[2-[4-(4-methyl-2-pyridinyl)-1-piperazinyl]ethyl]- (9CI) (CA INDEX NAME)

RN 148490-14-6 HCAPLUS

CN 4H-Pyrrolo[3,2,1-ij]quinolin-8-ol, 5,6-dihydro-2-methyl-1-[2-[4-(4-methyl-2-pyridinyl)-1-piperazinyl]ethyl]-, acetate (ester) (9CI) (CA INDEX NAME)

OAC OAC
$$CH_2-CH_2-N$$
 N Me

RN 148490-16-8 HCAPLUS

CN 4H-Pyrrolo[3,2,1-ij]quinoline, 5,6-dihydro-2-methyl-8-(2-methyl-1-propenyl)-1-[2-[4-(4-methyl-2-pyridinyl)-1-piperazinyl]ethyl]- (9CI) (CA INDEX NAME)

$$CH = CMe_2$$
 $CH_2 - CH_2 - N$
 N
 Me

RN 148490-17-9 HCAPLUS

CN 1-Propanone, 1-[5,6-dihydro-2-methyl-1-[2-[4-(4-methyl-2-pyridinyl)-1-piperazinyl]ethyl]-4H-pyrrolo[3,2,1-ij]quinolin-8-yl]-2-methyl- (9CI) (CA INDEX NAME)

$$C-Pr-i$$
 CH_2-CH_2-N
 N
 N
 N
 N
 N
 N

RN 148490-60-2 HCAPLUS

CN 4H-Pyrrolo[3,2,1-ij]quinoline, 4-butyl-5,6-dihydro-8-methoxy-2-methyl-1-[2-[4-(4-methyl-2-pyridinyl)-1-piperazinyl]ethyl]- (9CI) (CA INDEX NAME)

$$\begin{array}{c|c} & \text{OMe} \\ & \text{N} & \text{CH}_2 - \text{CH}_2 - \text{N} \\ & \text{Me} & \text{Me} \end{array}$$

RN 148490-62-4 HCAPLUS

CN Methanone, [5,6-dihydro-2-methyl-1-[2-[4-(4-methyl-2-pyridinyl)-1-piperazinyl]ethyl]-4H-pyrrolo[3,2,1-ij]quinolin-8-yl]phenyl- (9CI) (CA INDEX NAME)

RN 148490-63-5 HCAPLUS

CN Ethanone, 1-[5,6-dihydro-2-methyl-1-[2-[4-(4-methyl-2-pyridinyl)-1-piperazinyl]ethyl]-4H-pyrrolo[3,2,1-ij]quinolin-8-yl]- (9CI) (CA INDEX NAME)

$$\begin{array}{c} \text{Ac} \\ \text{N} \\ \text{Me} \end{array}$$

RN 148490-66-8 HCAPLUS CN 4H-Pyrrolo[3,2,1-ij]quinoline, 5,6-dihydro-2,8-dimethyl-1-[2-[4-(4-methyl-2-pyridinyl)-1-piperazinyl]ethyl]- (9CI) (CA INDEX NAME)

RN 161151-05-9 HCAPLUS
CN 4H-Pyrrolo[3,2,1-ij]quinoline, 4=butyl-5,6=di-hydro-2-methyl-8-(2-methylpropyl)-1-[2-[4-(4-methyl-2-pyridinyl)-1-piperazinyl]ethyl]- (9CI) (CA INDEX NAME)

RN 161151-13-9 HCAPLUS
CN 2-Propen-1-one, 1-[5,6-dihydro-2-methyl-1-[2-[4-(4-methyl-2-pyridinyl)-1-piperazinyl]ethyl]-4H-pyrrolo[3,2,1-ij]quinolin-8-yl]-3-phenyl-, (E)-(9CI) (CA INDEX NAME)

Double bond geometry as shown.

RN 161151-14-0 HCAPLUS

CN 1-Propanone, 1-[5,6-dihydro-2-methyl-1-[2-[4-(4-methyl-2-pyridinyl)-1-piperazinyl]ethyl]-4H-pyrrolo[3,2,1-ij]quinolin-8-yl]-2,2-dimethyl- (9CI) (CA INDEX NAME)

$$C-Bu-t$$
 $C+Bu-t$
 $C+Bu-t$
 $C+Bu-t$
 $C+Bu-t$
 $C+Bu-t$
 $C+Bu-t$
 $C+Bu-t$
 $C+Bu-t$
 $C+Bu-t$
 $C+Bu-t$

RN 161151-15-1 HCAPLUS

CN 1-Heptanone, 1-[5,6-dihydro-2-methyl-1-[2-[4-(4-methyl-2-pyridinyl)-1-piperazinyl]ethyl]-4H-pyrrolo[3,2,1-ij]quinolin-8-yl]- (9CI) (CA INDEX NAME)

1

$$C-(CH_2)_5-Me$$
 CH_2-CH_2-N
 Me
 CH_2-CH_2-N
 Me

RN 161151-16-2 HCAPLUS
CN 4H-Pyrrolo[3,2,1-ij]quinoline, 5,6-dihydro-2-methyl-1-[2-[4-(4-methyl-2-pyridinyl)-1-piperazinyl]ethyl]-8-(phenylmethyl)- (9CI) (CA INDEX NAME)

$$CH_2-Ph$$
 CH_2-CH_2-N
 N
 N
 Me

RN 161151-17-3 HCAPLUS

CN Methanone, cyclohexyl[5,6-dihydro-2-methyl-1-[2-[4-(4-methyl-2-pyridinyl)-1-piperazinyl]ethyl]-4H-pyrrolo[3,2,1-ij]quinolin-8-yl]- (9CI) (CA INDEX NAME)

$$CH_2-CH_2-N$$
 N
 N
 N
 N
 N
 N
 N

RN 161151-18-4 HCAPLUS

CN 4H-Pyrrolo[3,2,1-ij]quinoline, 8-(cyclohexylmethyl)-5,6-dihydro-2-methyl-1-[2-[4-(4-methyl-2-pyridinyl)-1-piperazinyl]ethyl]- (9CI) (CA INDEX NAME)

$$CH_2$$
 CH_2
 CH_2
 N
 N
 N
 N
 Me

IT 148490-22-6P

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(synthesis, structure-activity relationships, and pharmacol. evaluation of pyrrologuinolines for therapeutic application in asthma)

RN 148490-22-6 HCAPLUS

CN 4H-Pyrrolo[3,2,1-ij]quinolin-8-ol, 4-butyl-5,6-dihydro-2-methyl-1-[2-[4-(4-methyl-2-pyridinyl)-1-piperazinyl]ethyl]- (9CI) (CA INDEX NAME)

IT 161151-58-2P 161151-59-3P 161151-60-6P

161151-61-7P 161151-62-8P 161151-63-9P

161151-64-0P 161151-65-1P 161151-66-2P

161151-67-3P 161151-68-4P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(synthesis, structure-activity relationships, and pharmacol. evaluation of pyrroloquinolines for therapeutic application in asthma)

RN 161151-58-2 HCAPLUS

CN Piperazine, 1-[[5,6-dihydro-2-methyl-8-(2-methyl-1-oxopropyl)-4H-pyrrolo[3,2,1-ij]quinolin-1-yl]acetyl]-4-(4-methyl-2-pyridinyl)- (9CI) (CA INDEX NAME)

RN 161151-59-3 HCAPLUS

CN Piperazine, 1-[(8-benzoyl-5,6-dihydro-2-methyl-4H-pyrrolo[3,2,1-ij]quinolin-1-yl)acetyl]-4-(4-methyl-2-pyridinyl)- (9CI) (CA INDEX NAME)

RN 161151-60-6 HCAPLUS

CN Piperazine, 1-[(8-acetyl-5,6-dihydro-2-methyl-4H-pyrrolo[3,2,1-ij]quinolin-1-yl)acetyl]-4-(4-methyl-2-pyridinyl)- (9CI) (CA INDEX NAME)

RN 161151-61-7 HCAPLUS

CN Piperazine, 1-[[5,6-dihydro-2-methyl-8-(1-oxo-3-phenyl-2-propenyl)-4H-pyrrolo[3,2,1-ij]quinolin-1-yl]acetyl]-4-(4-methyl-2-pyridinyl)- (9CI) (CA INDEX NAME)

RN 161151-62-8 HCAPLUS

CN Piperazine, 1-[[8-(2,2-dimethyl-1-oxopropyl)-5,6-dihydro-2-methyl-4H-pyrrolo[3,2,1-ij]quinolin-1-yl]acetyl}-4-(4-methyl-2-pyridinyl)- (9CI) (CA INDEX NAME)

$$C-Bu-t$$
 $C-Bu-t$
 $C+2-C-N$
 N
 N
 N
 N
 N

RN 161151-63-9 HCAPLUS

CN Piperazine, 1-[[5,6-dihydro-2-methyl-8-(1-oxoheptyl)-4H-pyrrolo[3,2,1-ij]quinolin-1-yl]acetyl]-4-(4-methyl-2-pyridinyl)- (9CI) (CA INDEX NAME)

$$C-(CH_2)_5-Me$$
 $C+(CH_2)_5-Me$
 $C+(CH_2)_5-Me$
 $C+(CH_2)_5-Me$
 $C+(CH_2)_5-Me$

RN 161151-64-0 HCAPLUS

CN 4H-Pyrrolo[3,2,1-ij]quinoline-8-methanol, 5,6-dihydro-2-methyl-1-[2-[4-(4-methyl-2-pyridinyl)-1-piperazinyl]ethyl]-α-phenyl- (9CI) (CA INDEX NAME)

RN 161151-65-1 HCAPLUS

CN 4H-Pyrrolo[3,2,1-ij]quinoline-8-methanol, 5,6-dihydro-α,2-dimethyl-1-[2-[4-(4-methyl-2-pyridinyl)-1-piperazinyl]ethyl]- (9CI) (CA INDEX NAME)

$$\begin{array}{c} \text{OH} \\ \text{CH-Me} \\ \\ \text{Me} \\ \end{array}$$

RN 161151-66-2 HCAPLUS

CN 4H-Pyrrolo[3,2,1-ij]quinoline-8-methanol, 5,6-dihydro-2-methyl-1-[2-[4-(4-methyl-2-pyridinyl)-1-piperazinyl]ethyl]-α-(2-phenylethenyl)- (9CI) (CA INDEX NAME)

$$\begin{array}{c} \text{OH} \\ \text{CH-CH} = \text{CH-Ph} \\ \\ \text{CH}_2 - \text{CH}_2 - \text{N} \\ \\ \text{Me} \end{array}$$

RN 161151-67-3 HCAPLUS

CN 4H-Pyrrolo[3,2,1-ij]quinoline-8-methanol, α -(1,1-dimethylethyl)-5,6-

dihydro-2-methyl-1-[2-[4-(4-methyl-2-pyridinyl)-1-piperazinyl]ethyl](9CI) (CA INDEX NAME)

RN 161151-68-4 HCAPLUS
CN 4H-Pyrrolo[3,2,1-ij]quinoline-8-methanol, α-hexyl-5,6-dihydro-2-methyl-1-[2-[4-(4-methyl-2-pyridinyl)-1-piperazinyl]ethyl]- (9CI) (CA INDEX NAME)

ANSWER 8 OF 10 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 1993:539255 HCAPLUS

DN 119:139255

ED Entered STN: 02 Oct 1993

TI Preparation of annellated α -(piperazinylakyl)indoles and related compounds as drugs

IN Jasserand, Daniel; Paris, Dominique; Demonchaux, Patrice; Cottin, Michel;
Floc'h, Francois; Dupassieux, Pierre; White, Richard

PA Kali-Chemie Pharma GmbH, Germany

SO Ger. Offen., 52 pp.

CODEN: GWXXBX

DT Patent

LA German

IC ICM C07D471-06

ICS C07D487-06; C07D498-06; C07D513-06; A61K031-495; A61K031-44; A61K031-535; A61K031-54; A61K031-47

ICI C07D209-00, C07D227-00, C07D265-00, C07D279-00; A61K031-495, A61K031-44, A61K031-535, A61K031-54, A61K031-47

CC 28-16 (Heterocyclic Compounds (More Than One Hetero Atom))
Section cross-reference(s): 1, 63

FAN.CNT 1						
	PATENT NO.		KIND	DATE	APPLICATION NO.	DATE
ΡI	DE 4128015		A1	19930225		
	IL 102652		A1	19960723	IL 1992-102652	19920727 <
	EP 529452			19930303	EP 1992-113964	19920817 <
	EP 529452		A 3	19930421		
	EP 529452			19981111	•	-
	R: AT,	BE, CH,	DE, DK	, ES, FR,	GB, GR, IE, IT, LI, L	U, NL, PT, SE
	HU 64762		A2	19940228	HU 1992-2659 AT 1992-113964 ES 1992-113964	19920817 <
	AT 173260		E	19981115	AT 1992-113964	19920817 <
	ES 2126581		Т3	19990401	ES 1992-113964	19920817 <
	ZA 9206275		A	19930302	ZA 1992-6275	19920820 <
	CA 2076553			19930224		
	NO 9203282			19930224	NO 1992-3282	19920821 <
	AU 9221249			19930225	AU 1992-21249	19920821 <
	AU 657557		B2	19950316		
	US 5324725		A	19940628	US 1992-933476	19920821 <
	CZ 281568		В6	19961113	CZ 1992-2585	19920821 <
	RU 2083580			19970710	RU 1992-5052549	19920821 <
	CN 1069732		Α		CN 1992-109697	19920822 <
	JP 05208956			19930820	JP 1992-223968	19920824 <
	JP 3162495		B2	20010425		
PRAI	DE 1991-412	8015	A	19910823	<	
CLASS						
	ENT NO.	CLASS	PATENT		SSIFICATION CODES	
DE 4128015 ICM (ICS (C07D471-06				
			A61K031-44; A61K031-535; A61K031-54; A61K031-47			
ICI			C07D209-00, C07D227-00, C07D265-00, C07D279-00;			
			A61K031-495, A61K031-44, A61K031-535, A61K031-54,			
A61K031-47						
os	MARPAT 119:	139255				

GI

AB Title compds. [I; R1 = H, alkoxy, alkylthio, OH, halo, CF3, NO2, amino, (hydroxy)alkyl, (substituted) phenylalkyl, cycloalkyl, cycloalkylalkyl, alkenyl, alkanoyl, alkanoyloxy, alkanoylamino, (substituted) PhCO, PhCO2, PhCONH, cinnamoyl, cinnamoyloxy, cinnamoylamino; R2 = H, halo, alkyl,

II

ST

IT

IT

IT

ΙT

IT

IT

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alkoxy; R3, R4 = H, (hydroxy)alkyl, alkenyl, cycloalkyl, cycloalkylalkyl,
     (substituted) Ph, phenylalkyl, OH; R5 = (substituted) pyridyl, phenyl; A =
     O, S, bond, (alkyl-substituted) alkylene; Z = (alkyl- or HO-substituted)
     alkylene; B = N, CH; D = bond, CO; with provisos], were prepared Thus,
     1-amino-1,2,3,4-tetrahydroquinoline (preparation given) was refluxed with Et
     3-acetylpropionate in HOAC/HNHCl to give Et 5,6-dihydro-2-methyl-4H-
     pyrrolo(3,2,1-ij)quinoline-1-acetate, which was reduced with LiAlH4 to
     give the hydroxyethyl derivative This was treated with PBr3 in CHCl3 to give
     the bromoethyl derivative, which was heated with 1-(4-methylpyridin-2-
     yl)piperazine, KI, and Et3N in DMF at reflux to give title compound II.
     at 10-5 M gave 97% inhibition of platelet activating factor-induced
     aggregation of rabbit blood platelets, and at 2 + 10-5 M orally in
     rats gave 98% inhibition of passive cutaneous anaphylaxis. Tablets were
     prepared containing II.
     piperazinylalkylpyrroloquinoline prepn drug; PAF antagonist
     piperazinylalkylpyrroloquinoline; antihistamine
     piperazinylalkylpyrroloquinoline; antiasthmatic
     piperazinylalkylpyrroloquinoline; antiinflammatory
     piperazinylalkylpyrroloquinoline; pyrroloquinoline piperazinylalkyl prepn
     drug; indole piperazinylalkyl prepn drug
     Allergy inhibitors
     Inflammation inhibitors
        (annellated (piperazinylalkyl)indoles)
     Antihistaminics
        (antagonists, annellated (piperazinylalkyl)indoles)
     Bronchodilators
        (antiasthmatics, antagonists, annellated (piperazinylalkyl)indoles)
     65154-06-5, Platelet activating factor
     RL: RCT (Reactant); RACT (Reactant or reagent)
        (antagonists, annellated (piperazinylalkyl)indoles)
     148490-36-2P
     RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
     (Reactant or reagent)
        (preparation and reaction of, in preparation of
piperazinoalkylpyrroloquinoline
        derivative allergy inhibitor and antiinflammatory)
     148468-52-4P
                    148468-53-5P
                                   148468-54-6P
                                                  148468-55-7P
     148468-56-8P
                    148468-57-9P
                                   148468-58-0P
                                                  148468-59-1P
                                   148468-62-6P 148468-63-7P
     148468-60-4P
                    148468-61-5P
     148468-64-8P 148468-65-9P
                                 148468-66-0P
     148468-67-1P 148468-68-2P 148468-69-3P
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     148490-26-0P
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                                   148490-33-9P
                                                  148490-34-0P
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     148490-65-7P
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                                                                  149162-08-3P
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                                   149162-17-4P
                                                  149162-18-5P
                                                                  149162-19-6P
     149185-37-5P
                    149185-38-6P
                                   149185-39-7P
                                                  149250-78-2P
                                                                  149252-18-6P
     149252-19-7P
                    149252-20-0P
                                   149252-21-1P
                                                  149252-22-2P
                                                                  149252-23-3P
     149542-49-4P
                    149542-50-7P 149542-51-8P
                                                149542-53-0P
                    149902-01-2P
     149542-54-1P
     RL: SPN (Synthetic preparation); PREP (Preparation)
```

(preparation of, as allergy inhibitor and antiinflammatory)

```
ΙT
    83260-97-3P
                   148490-45-3P
                                  148490-46-4P
                                                 148490-47-5P
                                                                148490-48-6P
    148490-49-7P
                    148490-50-0P
    RL: SPN (Synthetic preparation); PREP (Preparation)
        (preparation of, as intermediate (piperazinylalkyl)pyrroloquinoline allergy
        inhibitor and antiinflammatory)
                  5825-45-6P, 1-Amino-1,2,3,4-tetrahydroquinoline
IT
     5825-44-5P
     108248-90-4P
    RL: SPN (Synthetic preparation); PREP (Preparation)
        (preparation of, as intermediate for (piperazinoalkyl)pyrroloquinoline
        allergy and antiinflammatory)
    148490-37-3P
IT
    RL: SPN (Synthetic preparation); PREP (Preparation)
        (preparation of, as intermediate for (piperazinoalkyl)pyrroloquinoline
        allergy inhibitor and antiinflammatory)
    24005-23-0P, 1,2,3,4-Tetrahydro-2-phenylquinoline
ΙT
                                                         40624-66-6P,
    1,2-Dihydro-2-phenylquinoline 105078-29-3P
                                                   148490-38-4P
                                                                   148490-39-5P
     148490-40-8P
                    148490-41-9P
                                   148490-42-0P
                                                  148490-43-1P
                                                                 148490-44-2P
    RL: SPN (Synthetic preparation); PREP (Preparation)
        (preparation of, as intermediate for (piperazinylalkyl)pyrroloquinoline
        allergy inhibitor and antiinflammatory)
                                   149542-76-7P
    149542-65-4P
                    149542-70-1P
                                                  149542-82-5P
                                                                 149542-84-7P
IT
    149542-86-9P
                                   149542-88-1P
                                                  149542-93-8P
                                                                 149573-40-0P
                    149542-87-0P
     149573-41-1P
                    149902-02-3P
    RL: SPN (Synthetic preparation); PREP (Preparation)
        (preparation of, as intermediate for allergy inhibitor and antiinflammatory)
IT
     54282-74-5P
    RL: SPN (Synthetic preparation); PREP (Preparation)
        (preparation of, as intermediate for piperazinoalkylpyrroloquinoline allergy
        inhibitor and antiinflammatory)
ΙT
     5965-53-7P
                  149542-71-2P
                                 149542-72-3P
                                                149542-73-4P
    RL: SPN (Synthetic preparation); PREP (Preparation)
        (preparation of, as intermediate for piperazinylakylpyrroloquinoline allergy
        inhibitor and antiinflammatory)
                                51511-34-3P
                                              149542-63-2P 149542-64-3P
                  39093-62-4P
IT
     3080-99-7P
     149573-39-7P
    RL: SPN (Synthetic preparation); PREP (Preparation)
        (preparation of, as intermediate for piperazinylalkylpyrrolobenzothiazine
        allergy inhibitor and antiinflammatory)
ΙT
     120-15-0P, 1,2,3,4-Tetrahydro-6-methoxyquinoline 4491-33-2P, Ethyl
                              4620-34-2P, Ethyl 1,2,3,4-tetrahydroquinoline-2-
    quinoline-2-carboxylate
    carboxylate 148490-16-8P 148490-51-1P
                                              148490-52-2P
                                                  149542-59-6P
                                   149542-58-5P
                                                                 149542-60-9P
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                    149542-57-4P
                                   149542-66-5P
                                                  149542-67-6P
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                    149542-62-1P
    149542-61-0P
                                                                 149542-78-9P
    149542-69-8P
                    149542-74-5P
                                   149542-75-6P
                                                  149542-77-8P
                                                                 149542-85-8P
    149542-79-0P
                    149542-80-3P
                                   149542-81-4P
                                                  149542-83-6P
                                                  149542-92-7P
     149542-89-2P
                    149542-90-5P
                                   149542-91-6P
    RL: SPN (Synthetic preparation); PREP (Preparation)
        (preparation of, as intermediate for piperazinylalkylpyrroloquinoline
        allergy inhibitor and antiinflammatory)
                    148490-15-7P
IT
     148490-14-6P
                                   149542-56-3P
    RL: SPN (Synthetic preparation); PREP (Preparation)
        (preparation of, as intermediate for piperazinylalkylpyrroloquinoline allery
        inhibitor and antiinflammatory)
     4926-28-7P, 2-Bromo-4-methylpyridine
ΙT
    RL: SPN (Synthetic preparation); PREP (Preparation)
        (preparation of, as intermediate for piperazinylalkylpyrroloquinoline
derivative
        allergy inhibitor and antiinflammatory)
     59084-16-1P, 1-Acetylpiperidine-4-carbonyl chloride
ΙT
    RL: SPN (Synthetic preparation); PREP (Preparation)
        (preparation of, as intermediate for piperidinylalkylpyrroloquinoline
        allergy inhibitor and antiinflammatory)
```

539-88-8, Ethyl 3-acetylpropionate 635-46-1, 1,2,3,4-Tetrahydroquinoline

ΙT

34803-67-3 RL: RCT (Reactant); RACT (Reactant or reagent) (reaction of, in preparation of of piperazinylalkylpyrroloquinoline allergy inhibitor and antiinflammatory) 498-94-2, Piperidine-4-carboxylic acid IT RL: RCT (Reactant); RACT (Reactant or reagent) (reaction of, in preparation of piperadinylalkylpyrroloquinoline allergy inhibitor and antiinflammatory) IT 79-30-1 RL: RCT (Reactant); RACT (Reactant or reagent) (reaction of, in preparation of piperazinoalkylpyrroloquinoline derivative allergy inhibitor and antiinflammatory) IT 96220-47-2 RL: RCT (Reactant); RACT (Reactant or reagent) (reaction of, in preparation of piperazinylalkylpyrrolobenzothiazine allergy inhibitor and antiinflammatory) 2969-81-5, Ethyl-4-bromobutyrate TΨ RL: RCT (Reactant); RACT (Reactant or reagent) (reaction of, in preparation of piperazinylalkylpyrroloquinole allergy inhibitor and antiinflammatory) 91-22-5, Quinoline, reactions 91-63-4, 2-Methylquinoline IT Quinoline-2-carboxylic acid 98-88-4, Benzoyl chloride 328-50-7, 2-Ketoglutaric acid 431-03-8, Butane-2,3-dione 591-51-5, Phenyllithium 3153-44-4, 3-(4-Methoxybenzoyl)propionic acid 5263-87-6, 6-Methoxyquinoline 13889-98-0, 1-Acetylpiperazine RL: RCT (Reactant); RACT (Reactant or reagent) (reaction of, in preparation of piperazinylalkylpyrroloquinoline allergy inhibitor and antiinflammatory) 462-06-6, Fluorobenzene IT RL: RCT (Reactant); RACT (Reactant or reagent) (reaction of, in preparation of piperidinylalkylpyrroloquinoline derivative allergy inhibitor and antiinflammatory) 148468-56-8P 148468-63-7P 148468-64-8P IT 148468-65-9P 148468-67-1P 148468-68-2P 148468-69-3P 148468-76-2P 148489-96-7P 148489-97-8P 148490-00-0P 148490-10-2P 148490-12-4P 148490-13-5P 148490-17-9P 148490-22-6P 149542-51-8P RL: SPN (Synthetic preparation); PREP (Preparation) (preparation of, as allergy inhibitor and antiinflammatory)

4H-Pyrrolo[3,2,1-ij]quinoline, 8-bromo-5,6-dihydro-2-methyl-1-[2-[4-(4-

methyl-2-pyridinyl)-1-piperazinyl]ethyl]-, trihydrochloride (9CI) (CA

148468-56-8 HCAPLUS

INDEX NAME)

RN

CN

RN 148468-63-7 HCAPLUS

CN 4H-Pyrrolo[3,2,1-ij]quinoline, 5,6-dihydro-2-methyl-8-(2-methylpropyl)-1[2-[4-(4-methyl-2-pyridinyl)-1-piperazinyl]ethyl]-, dihydrochloride (9CI)
(CA INDEX NAME)

$$\begin{array}{c} \text{Bu-i} \\ \text{Me} \end{array}$$

●2 HCl

RN 148468-64-8 HCAPLUS

CN 1-Propanone, 1-[4-butyl-5,6-dihydro-2-methyl-1-[2-[4-(4-methyl-2-pyridinyl)-1-piperazinyl]ethyl]-4H-pyrrolo[3,2,1-ij]quinolin-8-yl]-2-methyl-, hydrochloride (10:19) (9CI) (CA INDEX NAME)

$$\begin{array}{c} O \\ C - Pr - i \end{array}$$

$$CH_2 - CH_2 - N$$

$$Me$$

$$Me$$

●19/10 HCl

RN 148468-65-9 HCAPLUS

CN 4H-Pyrrolo[3,2,1-ij]quinolin-8-ol, 5,6-dihydro-2-methyl-1-[2-[4-(4-methyl-2-pyridinyl)-1-piperazinyl]ethyl]-, acetate (ester), dihydrochloride (9CI) (CA INDEX NAME)

●2 HCl

RN 148468-67-1 HCAPLUS
CN 4H-Pyrrolo[3,2,1-ij]quinoline, 5,6-dihydro-2-methyl-8-(2-methyl-1-propenyl)-1-[2-[4-(4-methyl-2-pyridinyl)-1-piperazinyl]ethyl]-, hydrochloride (10:19) (9CI) (CA INDEX NAME)

●19/10 HCl

RN 148468-68-2 HCAPLUS
CN 1-Propanone, 1-[5,6-dihydro-2-methyl-1-[2-[4-(4-methyl-2-pyridinyl)-1 piperazinyl]ethyl]-4H-pyrrolo[3,2,1-ij]quinolin-8-yl]-2-methyl-,
 dihydrochloride (9CI) (CA INDEX NAME)

●2 HCl

RN 148468-69-3 HCAPLUS
CN 4H-Pyrrolo[3,2,1-ij]quinoline, 4-butyl-5,6-dihydro-8-methoxy-2-methyl-1-[2[4-(4-methyl-2-pyridinyl)-1-piperazinyl]ethyl]-, dihydrochloride (9CI)
(CA INDEX NAME)

$$\begin{array}{c} \text{OMe} \\ \text{N-Bu} \\ \text{Me} \end{array}$$

●2 HCl

RN 148468-76-2 HCAPLUS
CN 1-Heptanone, 1-[5,6-dihydro-2-methyl-1-[2-[4-(4-methyl-2-pyridinyl)-1-piperazinyl]ethyl]-4H-pyrrolo[3,2,1-ij]quinolin-8-yl]-, monohydrochloride (9CI) (CA INDEX NAME)

$$C-(CH_2)_5-Me$$
 CH_2-CH_2-N
 N
 Me

● HCl

RN 148489-96-7 HCAPLUS

CN 4H-Pyrrolo[3,2,1-ij]quinoline, 5,6-dihydro-8-methoxy-2-methyl-1-[2-[4-(4-methyl-2-pyridinyl)-1-piperazinyl]ethyl]- (9CI) (CA INDEX NAME)

$$\begin{array}{c} \text{OMe} \\ \\ \text{N} \\ \\ \text{Me} \end{array}$$

RN 148489-97-8 HCAPLUS

CN 4H-Pyrrolo[3,2,1-ij]quinolin-8-ol, 5,6-dihydro-2-methyl-1-[2-[4-(4-methyl-2-pyridinyl)-1-piperazinyl]ethyl]- (9CI) (CA INDEX NAME)

RN 148490-00-0 HCAPLUS

CN 4H-Pyrrolo[3,2,1-ij]quinoline, 8-bromo-5,6-dihydro-2-methyl-1-[2-[4-(4-methyl-2-pyridinyl)-1-piperazinyl]ethyl]- (9CI) (CA INDEX NAME)

148490-10-2 HCAPLUS RN4H-Pyrrolo[3,2,1-ij]quinoline-8-methanol, 5,6-dihydro-2-methyl- α -(1-CNmethylethyl) -1-[2-[4-(4-methyl-2-pyridinyl)-1-piperazinyl]ethyl]- (9CI) (CA INDEX NAME)

148490-12-4 HCAPLUS RN

4H-Pyrrolo[3,2,1-ij]quinoline, 5,6-dihydro-2-methyl-8-(2-methylpropyl)-1-CN[2-[4-(4-methyl-2-pyridinyl)-1-piperazinyl]ethyl]- (9CI) (CA INDEX NAME)

$$\begin{array}{c} \text{Bu-i} \\ \text{Me} \end{array}$$

RN148490-13-5 HCAPLUS

1-Propanone, 1-[4-butyl-5,6-dihydro-2-methyl-1-[2-[4-(4-methyl-2-CNpyridinyl) -1-piperazinyl]ethyl] -4H-pyrrolo[3,2,1-ij]quinolin-8-yl] -2methyl- (9CI) (CA INDEX NAME)

$$\begin{array}{c} O \\ C - Pr - i \end{array}$$

$$\begin{array}{c} O \\ C - Pr - i \end{array}$$

$$\begin{array}{c} O \\ C - Pr - i \end{array}$$

$$\begin{array}{c} O \\ C - Pr - i \end{array}$$

$$\begin{array}{c} O \\ C - Pr - i \end{array}$$

$$\begin{array}{c} O \\ O - Pr - i \end{array}$$

$$\begin{array}{c} O \\ O - Pr - i \end{array}$$

$$\begin{array}{c} O \\ O - Pr - i \end{array}$$

$$\begin{array}{c} O - Pr$$

RN 148490-17-9 HCAPLUS

CN 1-Propanone, 1-[5,6-dihydro-2-methyl-1-[2-[4-(4-methyl-2-pyridinyl)-1-piperazinyl]ethyl]-4H-pyrrolo[3,2,1-ij]quinolin-8-yl]-2-methyl- (9CI) (CA INDEX NAME)

$$\begin{array}{c} \text{O} \\ \parallel \\ \text{C-Pr-i} \end{array}$$

RN 148490-22-6 HCAPLUS

CN 4H-Pyrrolo[3,2,1-ij]quinolin-8-ol, 4-butyl-5,6-dihydro-2-methyl-1-[2-[4-(4-methyl-2-pyridinyl)-1-piperazinyl]ethyl]- (9CI) (CA INDEX NAME)

$$\begin{array}{c|c} & \text{OH} \\ & \text{N} \\ & \text{Me} \end{array}$$

RN 149542-51-8 HCAPLUS

CN 4H-Pyrrolo[3,2,1-ij]quinoline-8-methanol, 5,6-dihydro-2-methyl-α-(1-methylethyl)-1-[2-[4-(4-methyl-2-pyridinyl)-1-piperazinyl]ethyl]-, (2E)-2-butenedioate (5:6) (salt) (9CI) (CA INDEX NAME)

CM 1

CRN 148490-10-2 CMF C28 H38 N4 O

CM 2

CRN 110-17-8 CMF C4 H4 O4

Double bond geometry as shown.

IT 148490-16-8P

RL: SPN (Synthetic preparation); PREP (Preparation) (preparation of, as intermediate for piperazinylalkylpyrroloquinoline allergy inhibitor and antiinflammatory)

RN 148490-16-8 HCAPLUS

CN 4H-Pyrrolo[3,2,1-ij]quinoline, 5,6-dihydro-2-methyl-8-(2-methyl-1-propenyl)-1-[2-[4-(4-methyl-2-pyridinyl)-1-piperazinyl]ethyl]- (9CI) (CA INDEX NAME)

IT 148490-14-6P

RL: SPN (Synthetic preparation); PREP (Preparation) (preparation of, as intermediate for piperazinylalkylpyrroloquinoline allery inhibitor and antiinflammatory)

RN 148490-14-6 HCAPLUS

CN 4H-Pyrrolo[3,2,1-ij]quinolin-8-ol, 5,6-dihydro-2-methyl-1-[2-[4-(4-methyl-2-pyridinyl)-1-piperazinyl]ethyl]-, acetate (ester) (9CI) (CA INDEX NAME)

```
OAc
          CH2-CH2-
Me
                              Me
    ANSWER 9 OF 10 HCAPLUS COPYRIGHT 2004 ACS on STN
     1988:493031 HCAPLUS
     109:93031
DN
    Entered STN: 17 Sep 1988
ED
     Improved preparation of spiropyrrolidinepyrrolobenzoxazinetriones useful
TΙ
    as aldose reductase inhibitors
    Masuzawa, Kuniyoshi; Okamura, Kyuya; Fujimori, Shizuyoshi; Kinoshita,
IN
    Susumu; Matsukubo, Hiroshi
    Kyorin Pharmaceutical Co., Ltd., Japan
PA
    Eur. Pat. Appl., 14 pp.
SO
    CODEN: EPXXDW
DT
    Patent
    English
LA
    ICM C07D498-20
TC
     ICS C07D471-20; C07D513-20; A61K031-535; A61K031-435; A61K031-54
    C07D498-20, C07D265-00, C07D209-00
ICI
     28-13 (Heterocyclic Compounds (More Than One Hetero Atom))
CC
    Section cross-reference(s): 1
FAN.CNT 1
                                          APPLICATION NO.
    PATENT NO.
                                                                 DATE
                        KIND
                               DATE
                                          ______
                        ----
                                                                 19870709 <--
                                          EP 1987-109949
                         A2
                               19880127
PΙ
    EP 254149
    EP 254149
                         A3
                               19890830
        R: AT, BE, CH, DE, ES, FR, GB, GR, IT, LI, NL, SE
                               19880125
                                          JP 1986-161789
                                                                 19860711 <--
     JP 63017885
                        A2
                                          AU 1987-75349
                               19880114
                                                                 19870708 <--
    AU 8775349
                         Α1
    AU 596851
                         B2
                               19900517
                                                                 19870708 <--
                         A1
                                         . CA 1987-541568
    CA 1261326
                               19890926
                                                                 19870710 <--
                                          DK 1987-3588
    DK 8703588
                         Α
                               19880112
                                                                 19870710 <--
                                          US 1987-72004
    US 4749789
                         Α
                               19880607
                                          HU 1987-3170
                                                                 19870710 <--
    HU 46325
                         A2
                               19881028
    HU 197012
                         В
                               19890228
PRAI JP 1986-161789
                               19860711 <--
CLASS
                CLASS PATENT FAMILY CLASSIFICATION CODES
PATENT NO.
                       _____
                ____
EP 254149
                ICM
                       C07D498-20
                       C07D471-20; C07D513-20; A61K031-535; A61K031-435;
                ICS
                       A61K031-54
                       C07D498-20, C07D265-00, C07D209-00
                ICI
    CASREACT 109:93031; MARPAT 109:93031
os
GI
```

The title compds. (I; R1-R4 = H, alkyl; 2 of R1-R4 = atoms to complete AB benzene rings; X1, X2 = H, halo, alkyl, alkoxy; Y = CH2, O, S), known aldose reductase inhibitors, were prepared by improved methods from heterocycloindolones II (R = alkyl, X = CH2CN, CH2CONH2). 1-Chloro-3,4-dihydro-2H-1,4-benzoxazine in HOAc was refluxed with di-Et ketomalonate to give Et 8-chloro-2,3-dihydro-6-hydroxy-5-oxopyrrolo[1,2,3d,e]-1,4-benzoxazine-6-carboxylate, which was converted to Et 6-carbamoylmethyl-8-chloro-2,3-dihydro-5-oxopyrrolo[1,2,3-d,e]-1,4benzoxazine-6-carboxylate (III) in 5 steps. III in EtOH was treated with 0.5 m aqueous NaOH to give 8'-chloro-2',3'-dihydrospiro[pyrrolidine-3,6'(5'H)pyrrolo[1,2,3-d,e][1,4]benzoxazine]-2,5,5'-trione. spiropyrrolidinepyrrolobenzoxazinetrione prepn aldose reductase inhibitor; ST benzoxazinetrione spiropyrrolidinepyrrolo prepn aldose reductase inhibitor IT Ring closure and formation (of carbamoylmethylpyrrole carboxylate derivs., spiropyrrolidinepyrroletriones derivs. by) 107-14-2, Chloroacetonitrile 590-17-0, Bromoacetonitrile TT RL: RCT (Reactant); RACT (Reactant or reagent) (alkylation by, of oxopyrrolobenzoxazine carboxylate) 609-09-6, Diethyl ketomalonate TΤ RL: RCT (Reactant); RACT (Reactant or reagent) (cyclocondensation of, with benzoxazine derivative) IT 113770-21-1 RL: RCT (Reactant); RACT (Reactant or reagent) (cyclocondensation of, with ketomalonate) IT 9028-31-3 RL: RCT (Reactant); RACT (Reactant or reagent) (inhibitors of, spiropyrrolidinepyrrolobenzoxazinetriones as) 99434-90-9P IT RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses) (preparation of, as aldose reductase inhibitor) 113770-16-4P 113770-17-5P 113770-18-6P IT 99434-90-9P 113770-19-7P 113770-20-0P RL: SPN (Synthetic preparation); PREP (Preparation) (preparation of, as aldose reductase inhibitor intermediate) 113770-19-7P 113770-20-0P IT RL: SPN (Synthetic preparation); PREP (Preparation) (preparation of, as aldose reductase inhibitor intermediate) 113770-19-7 HCAPLUS RN

CN Pyrrolo[1,2,3-de]-1,4-benzoxazine-6-carboxylic acid, 8-chloro-6-(cyanomethyl)-2,3,5,6-tetrahydro-5-oxo-, ethyl ester (9CI) (CA INDEX NAME)

54282-81-4P

```
0
     113770-20-0 HCAPLUS
RN
     Pyrrolo[1,2,3-de]-1,4-benzoxazine-6-carboxylic acid, 6-(2-amino-2-
CN
     oxoethyl)-8-chloro-2,3,5,6-tetrahydro-5-oxo-, ethyl ester (9CI)
     NAME)
          CH2-C-NH2
o'
         OEt
       0
     ANSWER 10 OF 10 HCAPLUS COPYRIGHT 2004 ACS on STN
L13
     1974:520418 HCAPLUS
ΑN
DN
     81:120418
     Entered STN: 12 May 1984
ED
     5,6-Dihydro-4H-pyrrolo[3,2,1-i,j]quinolines
TI
     Steck, Edgar A.; Fletcher, Lynn T.; Carabateas, Clarissa D.
ΑU
     Sterling-Winthrop Res. Inst., Rensselaer, NY, USA
CS
     Journal of Heterocyclic Chemistry (1974), 11(3), 387-93
SO
     CODEN: JHTCAD; ISSN: 0022-152X
DT
     Journal
LA
     English
     27-18 (Heterocyclic Compounds (One Hetero Atom))
CC
     For diagram(s), see printed CA Issue.
GΙ
     The title compds. (I, R = H, Ph, CO2Et, C6H4OMe-p, CH2CH2NH2; R2 = CO2Me,
AB
     CO2CH2 CH2NMe2, CONH2, CONEt2, CONCH2CH2NEt2, CSNHCH2CH2NEt2,
     CSNHCMeCH2OH, Ph, C6H4OMe-p, C6H4OH-p, Me; R2 = H, C1) were prepared by a
     Fischer indole synthesis of the hydrazone II, prepared from
     1-amino-1,2,3,4-tetrahydroquinoline or its 8-chloro derivative and RCH2COR1.
     Fischer indole synthesis pyrroloquinoline; quinoline amino ketone
ST
     reaction; ketone aminoquinoline reaction
ΙT
     Fischer indole synthesis
        (with 1-amino-1,2,3,4-tetrahydroquinoline hydrazones)
IT
     5825-45-6
     RL: RCT (Reactant); RACT (Reactant or reagent)
        (Fischer indole synthesis on hydrazones from)
IT
     18326-86-8P
                   51282-96-3P
                                 54282-56-3P
                                               54282-57-4P
                                                              54282-58-5P
     54282-59-6P
                   54282-60-9P
                                  54282-61-0P
                                                54282-62-1P
                                                              54282-63-2P
     54282-64-3P
                   54282-65-4P
                                  54282-66-5P
                                                54282-67-6P
                                                              54282-69-8P
                                                              54282-75-6P
     54282-70-1P
                   54282-71-2P
                                  54282-73-4P
                                                54282-74-5P
     54282-76-7P
                   54282-77-8P
                                  54282-78-9P
                                                54282-79-0P
                                                              54282-80-3P
```

54282-82-5P 54282-83-6P 54282-84-7P

54282-85-8P 54282-86-9P 54282-87-0P 54282-88-1P 54282-89-2P 54282-90-5P 54282-92-7P 54282-94-9P 54282-96-1P 54282-97-2P 54282-93-8P 54282-95-0P 54282-98-3P 54282-99-4P 54283-00-0P 54283-01-1P RL: SPN (Synthetic preparation); PREP (Preparation) (preparation of) IT 105-14-6 RL: RCT (Reactant); RACT (Reactant or reagent) (reaction of, with aminochlorotetrahydroquinoline) 6346-09-4 141-97-9 328-50-7 3197-25-9 28030-16-2 IT. 123-76-2 54282-91-6 RL: RCT (Reactant); RACT (Reactant or reagent) (reaction of, with aminotetrahydroquinoline) IT 28216-35-5 RL: RCT (Reactant); RACT (Reactant or reagent) (reaction of, with pyrroloquinoline derivative) TT 54282-68-7 RL: RCT (Reactant); RACT (Reactant or reagent) (reaction of, with pyruvic acid) TT 5891-21-4 RL: RCT (Reactant); RACT (Reactant or reagent) (reaction of, with thiourea and aminotetrahydroquinoline) 127-17-3, reactions IT RL: RCT (Reactant); RACT (Reactant or reagent) (with aminochlorotetrahydroquinoline) 54282-83-6P 54282-84-7P 54282-85-8P IT 54282-86-9P 54282-87-0P 54282-88-1P 54282-89-2P RL: SPN (Synthetic preparation); PREP (Preparation) (preparation of) 54282-83-6 HCAPLUS RN 4H-Pyrrolo[3,2,1-ij]quinoline-1-ethanamine, 8-chloro-5,6-dihydro-2-methyl-CN (9CI) (CA INDEX NAME)

RN 54282-84-7 HCAPLUS

CN 1H-Isoindole-1,3(2H)-dione, 2-[2-(8-chloro-5,6-dihydro-2-methyl-4H-pyrrolo[3,2,1-ij]quinolin-1-yl)ethyl]- (9CI) (CA INDEX NAME)

RN 54282-85-8 HCAPLUS

CN 4H-Pyrrolo[3,2,1-ij]quinoline-1-ethanamine, 8-chloro-5,6-dihydro-2-methyl-, hydrochloride (9CI) (CA INDEX NAME)

•x HCl

RN 54282-86-9 HCAPLUS

CN 4H-Pyrrolo[3,2,1-ij]quinoline-1-ethanamine, 8-chloro-5,6-dihydro-2-methyl-, 2-hydroxy-1,2,3-propanetricarboxylate (2:1) (9CI) (CA INDEX NAME)

CM 1

CRN 54282-83-6 CMF C14 H17 C1 N2

CM 2

CRN 77-92-9 CMF C6 H8 O7

$$\begin{array}{c} {\rm CO_2H} \\ | \\ {\rm HO_2C-CH_2-C-CH_2-CO_2H} \\ | \\ {\rm OH} \end{array}$$

RN 54282-87-0 HCAPLUS

CN 4H-Pyrrolo[3,2,1-ij]quinoline, 8-chloro-1-[2-(1,3-dihydro-2H-isoindol-2-yl)ethyl]-5,6-dihydro-2-methyl- (9CI) (CA INDEX NAME)

54282-88-1 HCAPLUS RN

4H-Pyrrolo[3,2,1-ij]quinoline, 8-chloro-1-[2-(1,3-dihydro-2H-isoindol-2-CN yl)ethyl]-5,6-dihydro-2-methyl-, monohydrochloride (9CI) (CA INDEX NAME)

HC1

54282-89-2 HCAPLUS RN

4H-Pyrrolo[3,2,1-ij]quinoline-1-ethanamine, 8-chloro-N,N-diethyl-5,6-CN dihydro-2-methyl-, monohydrochloride (9CI) (CA INDEX NAME)

HC1

=> fil uspatall

FILE 'USPATFULL' ENTERED AT 06:36:01 ON 26 OCT 2004 CA INDEXING COPYRIGHT (C) 2004 AMERICAN CHEMICAL SOCIETY (ACS)

FILE 'USPAT2' ENTERED AT 06:36:01 ON 26 OCT 2004 CA INDEXING COPYRIGHT (C) 2004 AMERICAN CHEMICAL SOCIETY (ACS)

=> => d l15 bib abs hitstr

ANSWER 1 OF 1 USPATFULL on STN 2004:139421 USPATFULL L15

AN

Novel fused indazoles and indoles and their use for the treatment of TI glaucoma

IN May, Jesse A., Fort Worth, TX, UNITED STATES

Dantanarayana, Anura P., Fort Worth, TX, UNITED STATES

ΡĪ US 2004106597 **A1** 20040603

US 2003-721204 **A1** 20031125 (10) ΑI

Continuation of Ser. No. WO 2002-US17114, filed on 30 May 2002, PENDING RLI

PRAI US 2001-295428P 20010601 (60)

DT Utility

FS APPLICATION

KILYK & BOWERSOX, P.L.L.C., 53 A EAST LEE STREET, WARRENTON, VA, 20186 LREP

CLMN Number of Claims: 19

ECL Exemplary Claim: 1

```
DRWN
      No Drawings
LN.CNT 924
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
       Novel fused indazoles and indoles are disclosed. Also disclosed are
       methods for the lowering and controlling of normal or elevated
       intraocular pressure as well as a method for the treatment of glaucoma-
       using compositions containing one or more of the compounds of the
      present invention.
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
    477965-81-4P, 1-(2-Azidopropyl)-7-benzyloxy-1,3,4,5-
      tetrahydrobenzo[cd]indazole
        (intermediate; preparation of novel fused indazoles and indoles with 5-HT2
        receptor activity for use in the treatment of glaucoma)
     477965-81-4 USPATFULL
RN
     Benz[cd]indazole, 1-(2-azidopropyl)-1,3,4,5-tetrahydro-7-(phenylmethoxy)-
CN
             (CA INDEX NAME)
       (9CI)
            о— сн<sub>2</sub> — Ph
              Nз
          СH2-СH-Ме
=> d l16 bib abs hitrn fhitstr tot
    ANSWER 1 OF 10 USPATFULL on STN
L16
       2004:133936 USPATFULL
AN
       Method of preventing or treating atherosclerosis or restenosis
TI
       Wathen, Michael W., Thousand Oaks, CA, UNITED STATES
IN
       Wathen, Lynne K., Thousand Oaks, CA, UNITED STATES
                               20040527
PΙ
       US 2004102473
                          Α1
       US 2003-651216
                               20030828 (10)
                          A1
ΑI
       US 2002-407090P
                           20020830 (60)
PRAI
DT
       Utility
       APPLICATION
FS
       FLYNN, THIEL, BOUTELL & TANIS, P.C., 2026 RAMBLING ROAD, KALAMAZOO, MI,
LREP
       49008-1699
       Number of Claims: 27
CLMN
       Exemplary Claim: 1
ECL
DRWN
       No Drawings
LN.CNT 2636
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
       The present invention provides a method of treating atherosclerosis or
AΒ
       restenosis in a mammal which comprises administering to said mammal an
       effective amount of a compound selected from the group consisting of
       structures of Formulae I, I' and II,
                                             ##STR1##
       wherein the substituents on the Formulae are as defined herein.
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
     388122-12-1 388122-13-2 388122-14-3
ΙT
      388122-15-4 388122-16-5
```

(heterocyclic carboxamide compds. for preventing or treating

atherosclerosis or restenosis)

IT

388122-12-1

(heterocyclic carboxamide compds. for preventing or treating atherosclerosis or restenosis)

RN 388122-12-1 USPATFULL

CN 6H-Pyrrolo[3,2,1-ij]quinoline-5-carboxamide, N-[(4-chlorophenyl)methyl]-1[2-(4-morpholinyl)ethyl]-8-(4-morpholinylmethyl)-6-oxo- (9CI) (CA INDEX NAME)

$$\begin{array}{c|c} & & & \\ & & & \\ \hline \\ & & \\ \end{array}$$

L16 ANSWER 2 OF 10 USPATFULL on STN

AN 2003:325044 USPATFULL

TI Agents and methods for the treatment of proliferative diseases

IN Al-Awar, Rima Salim, Raleigh, NC, UNITED STATES

Hecker, Kyle Andrew, Indianapolis, IN, UNITED STATES

Ray, James Edward, Indianapolis, IN, UNITED STATES

Huang, Jianping, Carmel, IN, UNITED STATES

Joseph, Sajan, Indianapolis, IN, UNITED STATES

Li, Tiechao, Fishers, IN, UNITED STATES

Paal, Michael, Hamburg, GERMANY, FEDERAL REPUBLIC OF

Rathnachalam, Radhakrishnan, Carmel, IN, UNITED STATES

Shih, Chuan, Carmel, IN, UNITED STATES

Waid, Philip Parker, Indianapolis, IN, UNITED STATES

Zhou, Xun, Carmel, IN, UNITED STATES

Zhu, Guoxin, Noblesville, IN, UNITED STATES

PI US 2003229026 A1 20031211

AI US 2002-130493 A1 20021202 (10)

WO 2000-US33273 . 20001218

DT Utility

FS APPLICATION

LREP ELI LILLY AND COMPANY, PATENT DIVISION, P.O. BOX 6288, INDIANAPOLIS, IN, 46206-6288

CLMN Number of Claims: 10

ECL Exemplary Claim: 1

DRWN No Drawings

LN.CNT 5779

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention provides selective kinase inhibitors of formula (I). ##STR1##

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

IT 345264-47-3P

(preparation of 11H,12H,14H-pyrrolo[3,4-c]quinolino[8',8a',1':3,2,1]-pyrrolo[2,3-a]carbazole-5,7-diones for the treatment of proliferative diseases)

IT 345264-47-3P

(preparation of 11H,12H,14H-pyrrolo[3,4-c]quinolino[8',8a',1':3,2,1]-pyrrolo[2,3-a]carbazole-5,7-diones for the treatment of proliferative diseases)

RN 345264-47-3 USPATFULL

CN 4H-Pyrrolo[3,2,1-ij]quinoline-1-acetamide, 8-fluoro-5,6-dihydro-6,6dimethyl- (9CI) (CA INDEX NAME)

```
ANSWER 3 OF 10 USPATFULL on STN
L16
       2003:220270 USPATFULL
ΑN
       Pyrroloquinolones as antiviral agents
ΤI
       Vaillancourt, Valerie A., Kalamazoo, MI, UNITED STATES
TN
       Staley, Sandra, Kalamazoo, MI, UNITED STATES
       Huang, Audris, Irvine, CA, UNITED STATES
       Nugent, Richard Allen, Galesburg, MI, UNITED STATES
       Chen, Ke, Kalamazoo, MI, UNITED STATES
       Nair, Sajiv K., Portage, MI, UNITED STATES
       Nieman, James A., Galesburg, MI, UNITED STATES
       Strohbach, Joseph Walter, Mendon, MI, UNITED STATES
                               20030814
       US 2003153561
PΙ
                          A1
                          В2
                               20040127
       US 6683181
                               20021105 (10)
       US 2002-288117
ΑI
                          A1
       Division of Ser. No. US 2001-888283, filed on 22 Jun 2001, GRANTED, Pat.
RLI
       No. US 6525049
       US 2000-215986P
                           20000705 (60)
PRAI
       US 2001-277012P
                           20010319 (60)
DT
       Utility
FS
       APPLICATION
       Jonathan P. O'Brien, Pharmacia & Upjohn Company, Global Intellectual
LREP
       Property, 301 Henrietta Street, Kalamazoo, MI, 49001
CLMN
       Number of Claims: 46
ECL
       Exemplary Claim: 1
DRWN
       No Drawings
LN.CNT 2081
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
       The present invention provides a compound of formula I
       which is useful as antiviral agents, in particular, as agents against
       viruses of the herpes family.
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
     388122-12-1P 388122-13-2P 388122-14-3P
      388122-15-4P 388122-16-5P
        (preparation of pyrroloquinolones as viral DNA polymerase inhibitors for
        antiviral agents)
IT
    388122-12-1P
        (preparation of pyrroloquinolones as viral DNA polymerase inhibitors for
        antiviral agents)
RN
     388122-12-1 USPATFULL
     6H-Pyrrolo[3,2,1-ij]quinoline-5-carboxamide, N-[(4-chlorophenyl)methyl]-1-
CN
       [2-(4-morpholinyl)ethyl]-8-(4-morpholinylmethyl)-6-oxo- (9CI) (CA INDEX
       NAME)
```

$$\begin{array}{c|c}
 & C \\
 & C \\$$

L16 ANSWER 4 OF 10 USPATFULL on STN

AN 2003:134587 USPATFULL

TI Agents and method for the treatment of proliferative diseases

IN Al-Awar, Rima Salim, Raleigh, NC, UNITED STATES

Hecker, Kyle Andrew, Indianapolis, IN, UNITED STATES

Huang, Jianping, Carmel, IN, UNITED STATES

Joseph, Sajan, Indianapolis, IN, UNITED STATES

Ray, James Edward, Indianapolis, IN, UNITED STATES

Waid, Philip Parker, Indianapolis, IN, UNITED STATES

PI US 2003092676 A1 20030515

US 6743785 B2 20040601

AI US 2002-130801 A1 20020521 (10)

WO 2000-US33274 20001218

DT Utility

FS APPLICATION

LREP ELI LILLY AND COMPANY, PATENT DIVISION, P.O. BOX 6288, INDIANAPOLIS, IN, 46206-6288

CLMN Number of Claims: 10

ECL Exemplary Claim: 1

DRWN No Drawings

LN.CNT 2812

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB ##STR1##

The present invention provides selective kinase inhibitors of formula (I).

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

IT 345264-47-3P

(preparation of maleimide and carbazole derivs. for the treatment of proliferative diseases)

IT 345264-47-3P

(preparation of maleimide and carbazole derivs. for the treatment of proliferative diseases)

RN 345264-47-3 USPATFULL

CN 4H-Pyrrolo[3,2,1-ij]quinoline-1-acetamide, 8-fluoro-5,6-dihydro-6,6-dimethyl- (9CI) (CA INDEX NAME)

L16 ANSWER 5 OF 10 USPATFULL on STN 2002:106425 USPATFULL AN ΤI Pyrrologuinolones as antiviral agents IN Huang, Audris, Irvine, CA, UNITED_STATES ----

Vaillancourt, Valerie A., Kalamazoo, MI, UNITED STATES

Staley, Sandra, Kalamazoo, MI, UNITED STATES

Nugent, Richard-Allen, Galesburg, MI, UNITED STATES

Chen, Ke, Kalamazoo, MI, UNITED STATES Nair, Sajiv K., Portage, MI, UNITED STATES Nieman, James A., Galesburg, MI, UNITED STATES Strohbach, Joseph W., Mendon, MI, UNITED STATES

20020509 ΡI US 2002055636 A1 US 6525049 **B2** 20030225 US 2001-888283 20010622 (9) AΤ **A**1

US 2000-215986P 20000705 (60) PRAI US 2001-277012P 20010319 (60)

ידת Utility APPLICATION FS

Lucy X. Yang, Pharmacia & Upjohn Company, Global Intellectual Property, LREP 301 Henrietta Street, Kalamazoo, MI, 49001

Number of Claims: 46 CLMN Exemplary Claim: 1 ECL

DRWN No Drawings

LN.CNT 2077

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

The present invention provides a compound of formula I ##STR1## AB

which is useful as antiviral agents, in particular, as agents against viruses of the herpes family.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

388122-12-1P 388122-13-2P 388122-14-3P TT

388122-15-4P 388122-16-5P

(preparation of pyrrologuinolones as viral DNA polymerase inhibitors for antiviral agents)

IT 388122-12-1P

(preparation of pyrroloquinolones as viral DNA polymerase inhibitors for antiviral agents)

388122-12-1 USPATFULL RN

6H-Pyrrolo[3,2,1-ij]quinoline-5-carboxamide, N-[(4-chlorophenyl)methyl]-1-CN [2-(4-morpholinyl)ethyl]-8-(4-morpholinylmethyl)-6-oxo- (9CI) (CA INDEX NAME)

$$\begin{array}{c|c} & & & \\ & & & \\ \hline \\ & & \\ \end{array}$$

L16 ANSWER 6 OF 10 USPATFULL on STN

AN 94:55544 USPATFULL

7-fused 2-(piperazinoalkyl) indole derivatives, intermediates and ΤI compositions thereof

Jasserand, Daniel, Lyons, France IN Paris, Dominique, Amberieux en Dombes, France

```
Demonchaux, Patrice, Chatillon sur Chalaronne, France
       Cottin, Michel, Chatillon sur Chalaronne, France
       Floc'H, Francois, Limonest, France
       Dupassieux, Pierre, Chatillon sur Chalaronne, France
       White, Richard, Bourg en Bresse, France
       Kali-Chemie Pharma GmbH, Hanover, Germany, Federal Republic of (non-U-S.
DΔ
       corporation)
      US--5324725----
PI.
                               19940628
                               19920821 (7)
       US 1992-933476
AΙ
      DE 1991-4128015
                           19910823
PRAI
DT
       Utility
       Granted
FS
EXNAM Primary Examiner: Shah, Mukund J.; Assistant Examiner: Datlow, Philip I.
       Evenson, McKeown, Edwards & Lenahan
LREP
       Number of Claims: 10
CLMN
       Exemplary Claim: 1,9
ECL
       No Drawings
DRWN
LN.CNT 3140
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
       Pharmacologically active compounds having anti-allergic properties
AB
       corresponding to the formula I ##STR1## which can be mono- or
       disubstituted in the phenyl ring and their acid addition salts and/or
       S-mono- or dioxides of sulfur-containing compounds of the formula I are
       described, together with processes and intermediates for their
       preparation.
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
     148468-56-8P 148468-63-7P 148468-64-8P
      148468-65-9P 148468-67-1P 148468-68-2P
      148468-69-3P 148468-76-2P 148489-96-7P
      148489-97-8P 148490-00-0P 148490-10-2P
      148490-12-4P 148490-13-5P 148490-17-9P
      148490-22-6P 149542-51-8P
        (preparation of, as allergy inhibitor and antiinflammatory)
IT
     148490-16-8P
        (preparation of, as intermediate for piperazinylalkylpyrroloquinoline
        allergy inhibitor and antiinflammatory)
     148490-14-6P
IT
        (preparation of, as intermediate for piperazinylalkylpyrroloquinoline allery
        inhibitor and antiinflammatory)
    148468-56-8P
IT
        (preparation of, as allergy inhibitor and antiinflammatory)
RN
     148468-56-8 USPATFULL
     4H-Pyrrolo[3,2,1-ij]quinoline, 8-bromo-5,6-dihydro-2-methyl-1-[2-[4-(4-
CN
       methyl-2-pyridinyl)-1-piperazinyl]ethyl]-, trihydrochloride (9CI)
       INDEX NAME)
```

3 HCl

ANSWER 7 OF 10 USPATFULL on STN L16 88:36125 USPATFULL ANProcess for the manufacture of spiro-linked pyrrolidine 2,5-diones ΤI Masuzawa, Kuniyoshi, Koga, Japan IN Okamura, Kyuya, Ohmiya, Japan Fujimori, Shizuyoshi, Tochigi, Japan Kinoshita, Susumu, Okaya, Japan Matsukubo, Hiroshi, Okaya, Japan Kyorin Pharmaceutical Co., Ltd., Tokyo, Japan (non-U.S. corporation) PA US 4749789 19880607 PΙ ΑI US 1987-72004 19870710 (7) JP 1986-161789 19860711 PRAI DTUtility FS Granted Primary Examiner: Schwartz, Richard A.; Assistant Examiner: Richter, J. EXNAM Oblon, Fisher, Spivak, McClelland & Maier LREP Number of Claims: 3 CLMN Exemplary Claim: 1 ECLDRWN No Drawings LN.CNT 393 CAS INDEXING IS AVAILABLE FOR THIS PATENT. This invention relates to novel processes for the manufacture of spiro-linked pyrrolidine-2,5-diones of the formula; ##STR1## which have a potent inhibitory activity on aldose reductase and are useful for

The invented processes are useful as improved and convenient method for a large scale manufacture.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

IT 113770-19-7P 113770-20-0P

(preparation of, as aldose reductase inhibitor intermediate)

reduction and prevention of chronic diabetic complications.

IT 113770-19-7P

(preparation of, as aldose reductase inhibitor intermediate)

RN 113770-19-7 USPATFULL

CN Pyrrolo[1,2,3-de]-1,4-benzoxazine-6-carboxylic acid, 8-chloro-6-(cyanomethyl)-2,3,5,6-tetrahydro-5-oxo-, ethyl ester (9CI) (CA INDEX NAME)

```
ANSWER 8 OF 10 USPAT2 on STN
L16
       2003:220270 USPAT2
AN
       Pyrroloquinolones as antiviral agents
ΤI
       Vaillancourt, Valerie A., Kalamazoo, MI, United States
IN
       Staley, Sandra, Kalamazoo, MI, United States
       Huang, Audris, Irvine, CA, United States
       Nugent, Richard Allen, Galesburg, MI, United States
       Chen, Ke, Kalamazoo, MI, United States
       Nair, Sajiv K., Portage, MI, United States
       Nieman, James A., Galesburg, MI, United States
       Strohbach, Joseph Walter, Mendon, MI, United States
       Pharmacia and Upjohn Comapny, Kalamazoo, MI, United States (U.S.
PΑ
       corporation)
       US 6683181
                               20040127
PΙ
                          B2
                               20021105 (10)
       US 2002-288117
AΙ
       Division of Ser. No. US 2001-888283, filed on 22 Jun 2001, now patented,
RLI
       Pat. No. US 6525049
                           20000705 (60)
PRAI
       US 2000-215986P
       US 2001-277012P
                           20010319 (60)
DT
       Utility
FS
       GRANTED
      Primary Examiner: Huang, Evelyn Mei
EXNAM
       Yang, Lucy X., O'Brien, Jonthan P.
LREP
       Number of Claims: 7
CLMN
ECL
       Exemplary Claim: 1
DRWN
       0 Drawing Figure(s); 0 Drawing Page(s)
LN.CNT 1711
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
       The present invention provides a compound of formula I ##STR1##
       which is useful as antiviral agents, in particular, as agents against
       viruses of the herpes family.
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
     388122-12-1P 388122-13-2P 388122-14-3P
      388122-15-4P 388122-16-5P
        (preparation of pyrrologuinolones as viral DNA polymerase inhibitors for
        antiviral agents)
    388122-12-1P
        (preparation of pyrroloquinolones as viral DNA polymerase inhibitors for
        antiviral agents)
     388122-12-1 USPAT2
RN
     6H-Pyrrolo[3,2,1-ij]quinoline-5-carboxamide, N-[(4-chlorophenyl)methyl]-1-
CN
       [2-(4-morpholinyl)ethyl]-8-(4-morpholinylmethyl)-6-oxo- (9CI) (CA INDEX
       NAME)
```

```
ANSWER 9 OF 10 USPAT2 on STN
L16
       2003:134587 USPAT2
ΑN
       Agents and methods for the treatment of proliferative diseases
TI
       Al-Awar, Rima Salim, Raleigh, NC, United States
IN
       Hecker, Kyle Andrew, Indianapolis, IN, United States
       Huang, Jianping, Carmel, IN, United States
       Joseph, Sajan, Indianapolis, IN, United States
       Ray, James Edward, Indianapolis, IN, United States
       Waid, Philip Parker, Indianapolis, IN, United States
       Eli Lilly and Company, Indianapolis, IN, United States (U.S.
PA
       corporation)
                               20040601
PΙ
       US 6743785
                          B2
       WO 2001044235
                      20010621
       US 2002-130801
                               20020521 (10)
ΑI
       WO 2000-US33274
                               20001218
       US 1999-171219P
                           19991216 (60)
PRAI
       US 1999-171269P
                           19991216 (60)
DT
       Utility
       GRANTED
FS
       Primary Examiner: Raymond, Richard L.; Assistant Examiner: Liu, Hong
EXNAM
       Tucker, Tina M.
LREP
CLMN
       Number of Claims: 10
ECL
       Exemplary Claim: 1
DRWN
       0 Drawing Figure(s); 0 Drawing Page(s)
LN.CNT 2732
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
       The present invention provides selective kinase inhibitors of formula
AB
       (I). ##STR1##
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
IT
     345264-47-3P
        (preparation of maleimide and carbazole derivs. for the treatment of
        proliferative diseases)
IT
    345264-47-3P
        (preparation of maleimide and carbazole derivs. for the treatment of
        proliferative diseases)
RN
     345264-47-3 USPAT2
     4H-Pyrrolo[3,2,1-ij]quinoline-1-acetamide, 8-fluoro-5,6-dihydro-6,6-
CN
```

dimethyl- (9CI) (CA INDEX NAME)

NAME)

L16

ANSWER 10 OF 10 USPAT2 on STN

```
2002:106425 USPAT2
AN
       Pyrroloquinolones as antiviral agents
TI
       Vaillancourt, Valerie A., Kalamazoo, MI, United States
IN
       Staley, Sandra, Kalamazoo, MI, United States
       Huang, Audris, Irvine, CA, United States
       Nugent, Richard Allen, Galesburg, MI, United States
       Chen, Ke, Kalamazoo, MI, United States
       Nair, Sajiv K., Portage, MI, United States
       Nieman, James A., Galesburg, MI, United States
       Strohbach, Joseph Walter, Mendon, MI, United States
       Pharmacia & Upjohn Company, Kalamazoo, MI, United States (U.S.
PA
       corporation)
                               20030225
PΙ
       US 6525049
                          B2
       US 2001-888283
                               20010622 (9)
AΙ
       US 2000-215986P
                           20000705 (60)
PRAI
       US 2001-277012P
                           20010319 (60)
DT
       Utility
FS
       GRANTED
EXNAM Primary Examiner: Huang, Evelyn Mei
       Yang, Lucy X., O'Brien, Jonathan P.
LREP
       Number of Claims: 43
CLMN
       Exemplary Claim: 1
ECL
       0 Drawing Figure(s); 0 Drawing Page(s)
DRWN
LN.CNT 2039
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
       The present invention provides a compound of formula I ##STR1##
AB
       which is useful as antiviral agents, in particular, as agents against
       viruses of the herpes family.
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
     388122-12-1P 388122-13-2P 388122-14-3P
IT
      388122-15-4P 388122-16-5P
        (preparation of pyrroloquinolones as viral DNA polymerase inhibitors for
        antiviral agents)
IT
    388122-12-1P
        (preparation of pyrroloquinolones as viral DNA polymerase inhibitors for
        antiviral agents)
RN
     388122-12-1 USPAT2
     6H-Pyrrolo[3,2,1-ij]quinoline-5-carboxamide, N-[(4-chlorophenyl)methyl]-1-
CN
```

[2-(4-morpholinyl)ethyl]-8-(4-morpholinylmethyl)-6-oxo- (9CI) (CA INDEX

=>